GCC LaserPro

ДЕЛОВАЯ ИНИЦИАТИВА
www.delinit.by

StellarMark CIIA-Li

User Manual

4F., No.236, Fude 2nd Rd., Xizhi Dist., New Taipei City 22151, Taiwan 886-2-6616-6692 Fax:886-2-2694-6875

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Chapter 1

Safety

1.1 Principles of CO_2 Laser

LASER is the acronym for Light Amplification by Stimulated Emission of Radiation. A CO2 laser works by electrically stimulating the molecules within a carbon dioxide gas mixture. When focused through a lens, this highly-intense, invisible beam will vaporize many materials. Depending on the speed and intensity of the projected beam, a CO2 laser may be used to engrave or cut through a wide variety of materials.

1.2 Safety Ratings

Laser marking systems that have the CDRH safety rating of Class 4R and the StellarMark CIIA-Li has been equipped with a red guidance pointer. This red dot allows the operator to safely see the focal point of the laser beam. It gives StellarMark CIIA-Li a rating of 4R when it is integrated with a safety door while operation.

1.3 The Safety Interlock System

With the optional item of safety shield, it gives the StellarMark CIIA-Li marking systems that automatically shut off the laser when the door is opened. There are some magnets on the side of safety door, which activate this safety mechanism. Do not attempt to remove or modify these magnets or any other component of the safety interlock system.

1.4 The safety Labels

According to CDRH standards, all fixed or removable covers that allow access to a laser beam must have the appropriate laser warning labels attached to them. These warning labels must be clearly visible to the operator prior to removing the cover. Additional labels must be applied inside of the machine and be visible in the event the covers are removed. A label clearly displaying the manufacturer’s name, date of manufacture, description of product, model number, serial number, and compliance statement must be attached to the outside of the machine.

In compliance with CDRH standards, the required warning labels are affixed at the time of manufacture to the LaserPro StellarMark CIIA-Li in the appropriate locations. These labels are not to be modified in any way or removed for any reason. Please familiarize yourself with the specific labels and their locations on the machine. Below is a list of all the safety labels and their locations on the machine.

Product Label

This label is located at the right-back side of machine. All the product information such as Serial Number, Model Numbers, Laser Power and Electric power can be found here. Before requiring any tech support, always provide service person the information on this label.

Serial Number	I50357
Manufacturer	GCC www.GCCworld.com
Product	Laser Marking System
Model	StellarMark
Model Number	CIIA-Li 12 010
Wavelength	10.57~10.63 μm
Power	CO_2 12W
Manufactured	May 2012
Input	100~240 VAC, 50~60 Hz, Max 15A

Class 4 Laser Product
This product complies with EN60825-1:1994
Made in Taiwan
4F., No.236, Fude 2nd Rd., Xizhi Dist., New Taipei City 22151, Taiwan

Serial Number	I50357
Manufacturer	GCC www.GCCworld.com
Product	Laser Marking System
Model	StellarMark
Model Number	CIIA-Li 12 050
Wavelength	10.57~10.63 μm
Power	CO_2 12W
Manufactured	May 2012
Input	100~240 VAC, 50~60 Hz, Max 15A

Class 4 Laser Product
This product complies with EN60825-1:1994
Made in Taiwan
4F., No.236, Fude 2nd Rd., Xizhi Dist., New Taipei City 22151, Taiwan

Serial Number	I50357
Manufacturer	GCC www.GCCworld.com
Product	Laser Marking System
Model	StellarMark
Model Number	CIIA-Li 12 070
Wavelength	10.57~10.63 μm
Power	CO_2 12W
Manufactured	May 2012
Input	100~240 VAC, 50~60 Hz, Max 15A

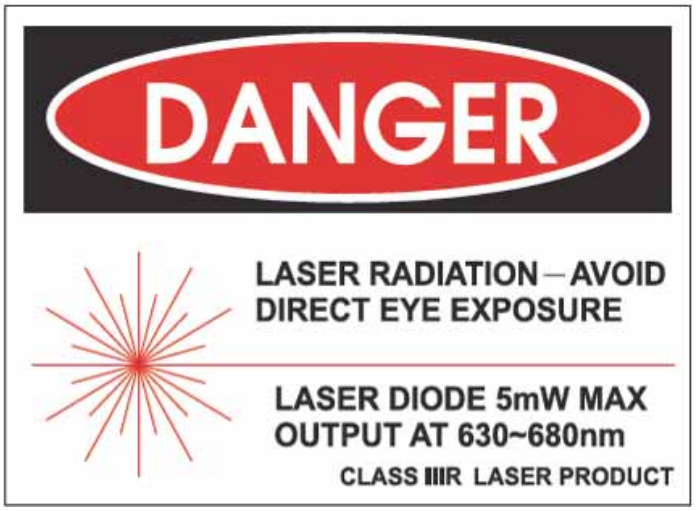
Class 4 Laser Product
This product complies with EN60825-1:1994
Made in Taiwan
4F., No.236, Fude 2nd Rd., Xizhi Dist., New Taipei City 22151, Taiwan

Serial Number	I50357
Manufacturer	GCC www.GCCworld.com
Product	Laser Marking System
Model	StellarMark
Model Number	CIIA-Li 12 140
Wavelength	10.57~10.63 μm
Power	CO_2 12W
Manufactured	May 2012
Input	100~240 VAC, 50~60 Hz, Max 15A

Class 4 Laser Product
This product complies with EN60825-1:1994
Made in Taiwan
4F., No.236, Fude 2nd Rd., Xizhi Dist., New Taipei City 22151, Taiwan

CDRH Label

This label indicates the class level of CDRH.



CE Label

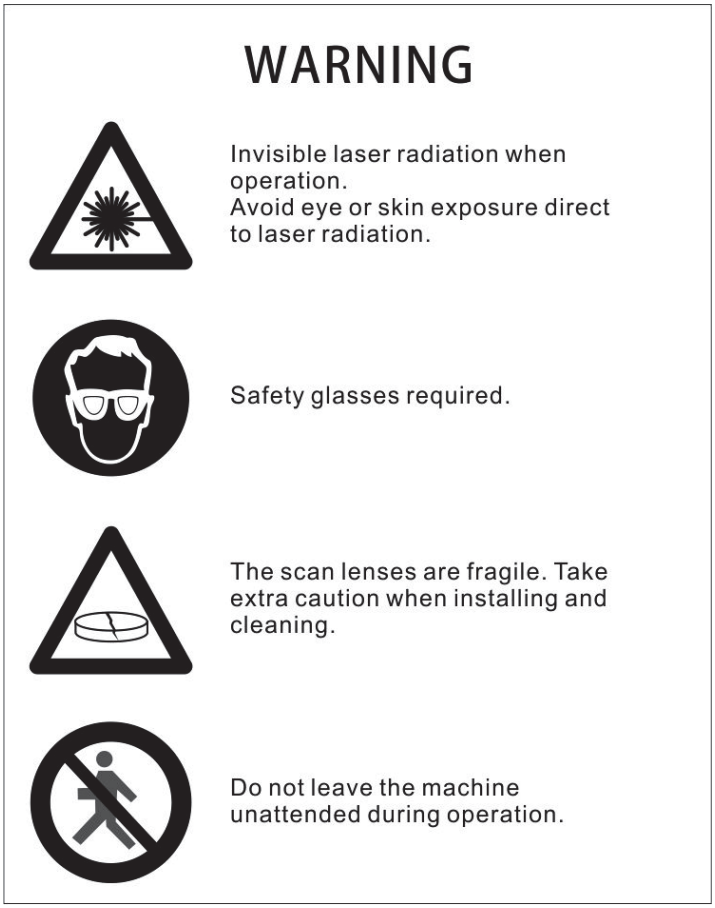
This label indicates the class level of CE

Emergency Stop Label

This label indicates the emergency stop button. You can find this label on the left side of the power supply unit

Warning Label

Warning Label is written all the necessary information to be aware of in every operation.



1.5 Safety Measures

- **LASER RADIATION WARNING:** Exposure to laser radiation may result in physical burns and severe eye damage. Proper use and regular maintenance of this machine is important to the safety of all people in the immediate area.
- Prior to operation, carefully read and familiarize yourself with the warning labels located on both your laser system and in this manual.
- Never leave the machine unattended during the laser cutting and engraving process. The laser may ignite combustible materials. A well-maintained fire extinguisher and operational smoke or fire detector should be kept in the vicinity of the machine.
- Always wear safety goggles when the laser system is in operation. Reflective materials such as mirrors, enameled brass and anodized aluminum may

partially-reflect some of the invisible laser radiation. Severe eye damage may occur if appropriate safety goggles are not worn.

NOTE

Each LaserPro laser machine is shipped with a single pair of safety goggles. If additional safety goggles are required, please contact GCC directly or an authorized GCC distributor. If you wish to purchase one on your own, please make sure the safety goggles meet these requirements:

190 - 398 nm OD5+

10,600 nm OD5+

Visible Light Transmission: 92.9%

- Connect the machine to a properly grounded power outlet. Ensure the voltage of the power source is identical to the voltage of the machine.
- Do not attempt to modify or disassemble the laser module.
- Do not attempt to remove or modify any component of the machine's laser interlock safety system.
- Ensure the immediate work area of the machine is well-ventilated. Odors, vapors, and dust are byproducts generated during the laser marking and cutting process. An exhaust system is recommended. Please contact GCC or your local GCC distributor for more information.
- Do not laser heat-sensitive surfaces or materials that may generate toxic fumes, such as PVC and Teflon.
- Regularly clean and maintain your machine according to our cleaning and maintenance instructions. Doing so will ensure a machine that will operate effectively and safely over a long period of time.

1.6 Operating Environment

Please follow the guidelines when considering a suitable location to set the LaserPro StellarMark CIIA-Li. Improper work environments may lead to operational malfunction and/or unsafe working conditions.

The LaserPro StellarMark CIIA-Li should be placed and operated in a clean environment, avoid places where the machine is exposed to high temperatures, dust, or high humidity

- Keep the machine where the room temperature is between **15 – 30 degrees Celsius** or 58 – 85 degrees Fahrenheit.
- Avoid small, enclosed areas where a considerable amount of dust is present.
- Avoid areas where the humidity is above 70% or where the temperature is near the dew point.
- Setup the machine to be apart from the wall for at least 40cm (1.5 feet).
- Choose a flat surface that is not exposed to high levels of vibration.
- Be sure that your mounting platform has been securely fastened to the table, stand, or floor.
- Choose a location that is large enough to accommodate the machine, the computer and a work/storage table.
- Have a fire extinguisher close to the working location at all times.
- Make sure your smoke/fire detecting system is functioning.

Chapter 2

Unpacking & Contents

Unloading and Unpacking

Contents and Accessories Checklist

2.1 Unpacking and Unloading

The StellarMark CIIA-Li is shipped in one crate that contains one laser marker which is connected with a control box, the software and all of the necessary accessories in an accessories kit.

WARNING

To prevent damage to the machine or personal injury, please get assistance when loading and unloading the shipping crate.

NOTE

Please save the original shipping crate in case it is needed for future transport or product servicing.

2.2 Contents and Accessories Checklist

Please check the following items have been shipped with the StellarMark CIIA-Li:

Item	Unit	Item	Unit
Hex Head Screws Driver	1	G-Mark Advance CD Set (With Keypro)	1
LaserPro CD Set (User Manual)	1	I/O Terminal Platform(5ESDVM-12P)	2
Lens Cleaner	1	I/O Terminal Platform(5ESDVM-10P)	1
Lens Cleaning Paper	1	Laser Marker Power Cable (48V/20A/7Pin 2.5m)	1
Cotton Bud (100 pcs/ pack)	1	SCSI Cable 50pin Length 2.5m	1
Lenses Only Label Sticker	1	AC Power Cable(Europe)	1
CO_2 Goggle	1	Power Cable (US)	1
Wood 14 x 11 cm(Blank Sample)	2	Power Cable (AUS)	1
Lens Parameter Marking List	3	USB CABLE	1
M6 Screw Plastic Foot	4	Acrylic Bar Focus Tool (for CIIA-Li 010/ 050 Only)	1
Nut (M6xt5xS10).	4		

Chapter 3

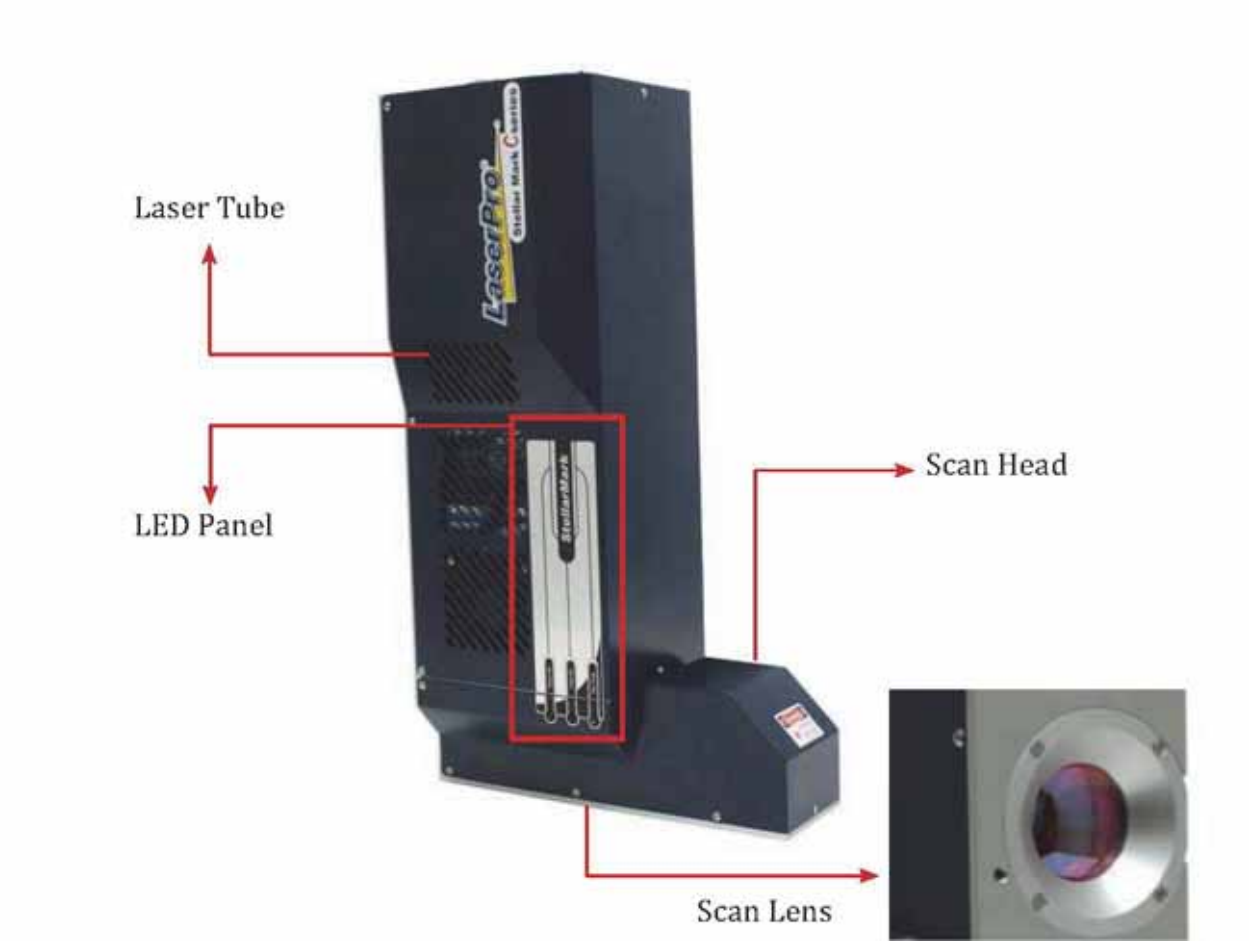
Mechanical Overview

Laser Marker

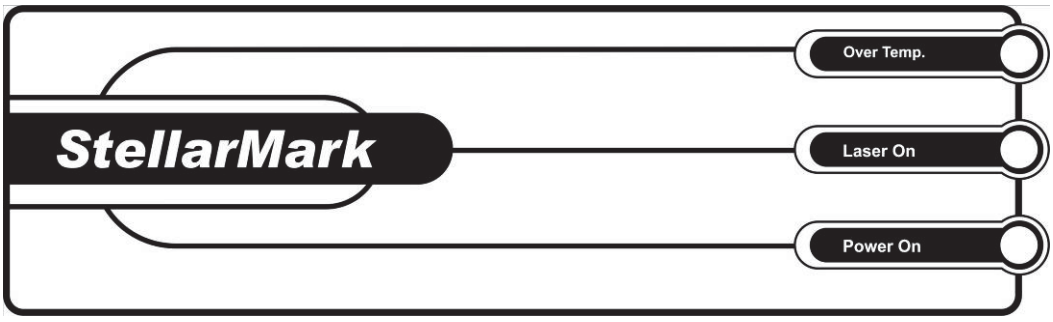
Machine Dimension

Before you complete the installation, it is a good idea to become more familiar with the machine's features and components. You should also make note of the new features that have been developed exclusively for the StellarMark.

3.1 Laser Marker



3.1.1 LED Panel



There are 3 LED lights on the panel and they will indicate out three working status of "**Over Temp**", "**Laser On**" and "**Power on**" of the laser marker.

■ **Over Temp:**

When the red LED light is on, the laser marker will stop firing. Please turn off the master power of the laser marker and re-start it when the operating temperature is dropped below 35°C.

■ **Laser On:**

When laser is firing, the red LED light is on.

■ **Power On:**

When the laser is power on and the green LED light is on.

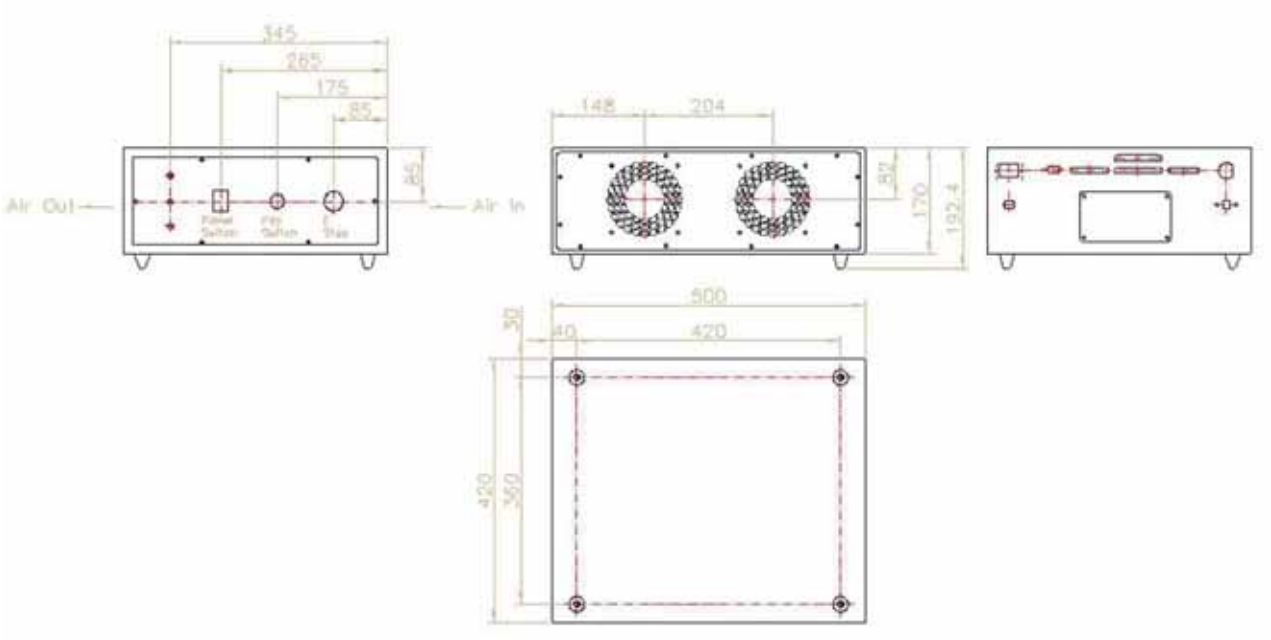
The StellarMark gives you the choice of 4 scan lens sizes to best suit your marking applications. The smaller filed size scan lens will produce a smaller spot size, however it will cover a smaller scan work area. The smaller spot size will provide higher marking resolution. The larger filed scan lens will produce a larger spot size with lower marking resolution.

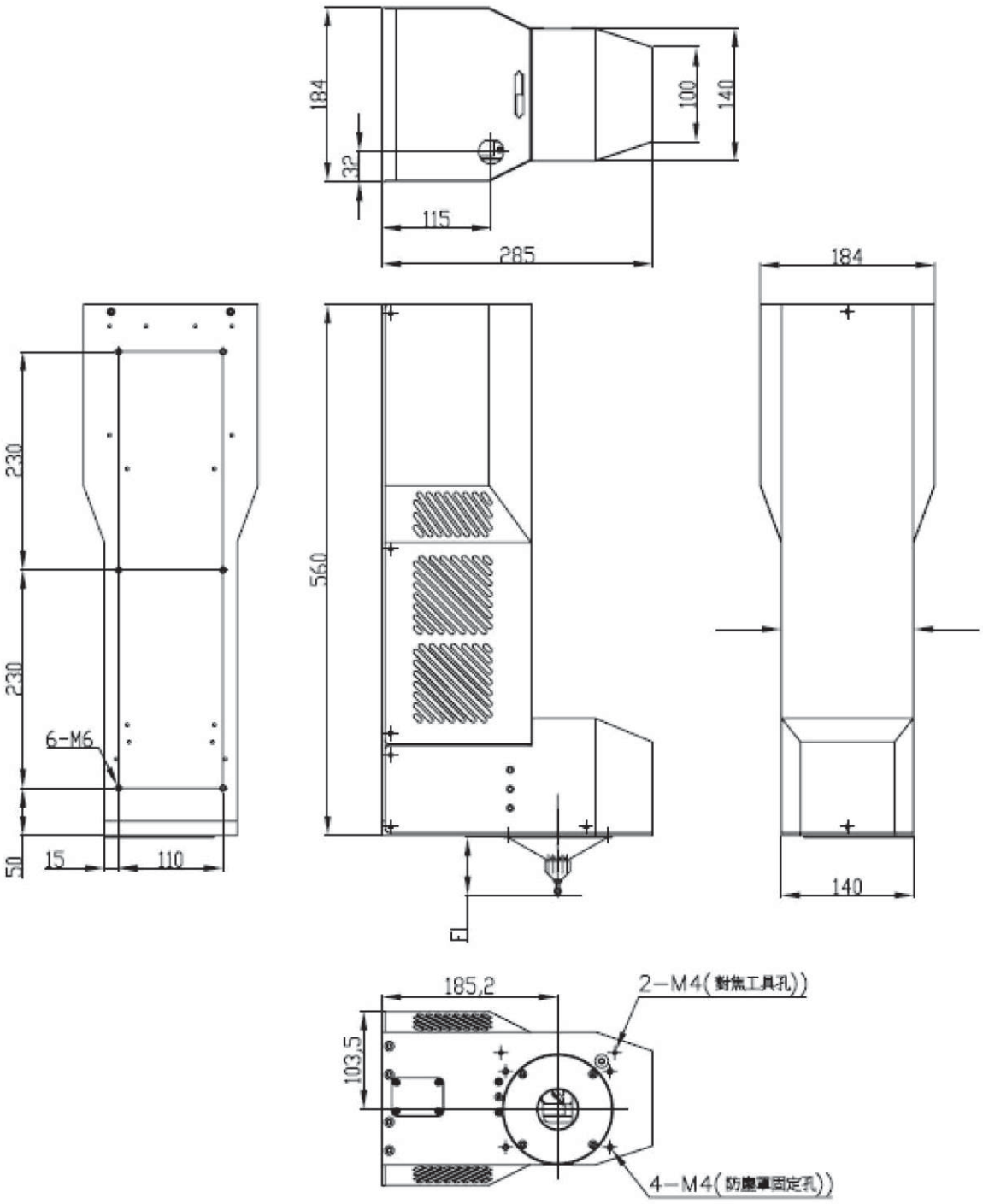
Working Area	Focal Length (FL)
10 x 10	25.89 ± 1
50 x 50	65.268 ± 1
70 x 70	91.16 ± 1
140 x 140	196.43 ± 2

NOTE

The scan lens is very fragile and careful while the cleaning and installing. Defective or unworkable due to abuse, mishandling, misuse, accident, alteration, negligence, improper installation, deficient cleaning or other causes will not be covered in the warranty.

3.2 Machine Dimension




184
32
100
140
115
285
184
230
230
560
6-M6
50
15
110
140
185,2
2-M4(對焦工具孔)
103,5
4-M4(防塵罩固定孔)

Chapter 4

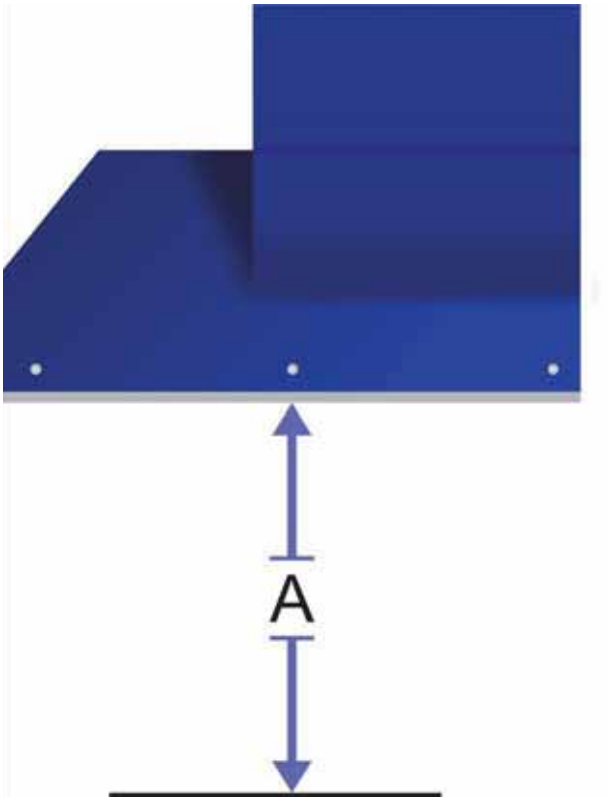
Working Distance

Recommended Working Distance

Pyramid Focus Tool

4.1 Recommended Working Distance

Due to the characteristics of the scan lens, a certain distance between the marking object and scan lens has to be set for an optimized output quality. The working distances for different scan lens are recommended as below:



Scan Lens	10 x 10 mm	50 x 50 mm	70 x 70 mm	140 x 140 mm
A (Focus Tool Length)	26 ± 1 mm	65 ± 1 mm	91 ± 1 mm	196.5 ± 2 mm

NOTE

In order to achieve the best output quality, the working distance must set precisely as recommended.

For instance the 70x70 mm scan lens can only tolerate a distance which is +- 1mm different from the recommended working distance of 105mm.

If the working distance is set and out of the recommended range, the output work produced will be unsatisfactory.

4.2 Pyramid Focus Tool

The innovative and patened focus tool is an accessory unit for providing the best working distance on StellarMark

You will find the focus tool is located in accessory box and an optimized length is set for your scan lens size when the machine is shipped.

> **NOTE**
> Fixed length will be varied depend on the size of scan lens.
> The fixed length of Pyramid Ruler equals the recommended working distance and you will no need to adjust the length.

Screw the Pyramid Ruler beneath the laser marker and let the to be marked material touches the bottom screw of Pyramid Ruler, the distance between the two is the best working distance.

With this tool, you can always have the best working distance for different materials by just place your desired marking material on the z axis table and move the z axis table up until the mark material touches the bottom screw of Pyramid Ruler.

Chapter 5

Machine Setup

Powering Up the Machine

Power Cable Connection

I/O Definitions

I/O Installation

5.1 Powering Up the Machine

WARNING
Make sure both the LaserPro StellarMark C-12IIA-Li and the computer are turned off before connecting either to a power source.

1) Connect the male end of the power cord to a quality surge protector and connect the surge protector to a properly grounded outlet.
2) Do the same for the computer system.
3) Connect the female end of the power cord into the machine's power cable inlet located on the left side of the control box.

NOTE
The StellarMark C-12IIA-Li as been designed to work with AC Auto Switch 100 & 240 VAC, 50-60Hz

5.2 Power Cable Connection

Step 1. Connect the laser marker power cable to the laser marker.

Step 2. Connect the D_SUB cable 25pin &15pin between the PCI card and the laser marker.

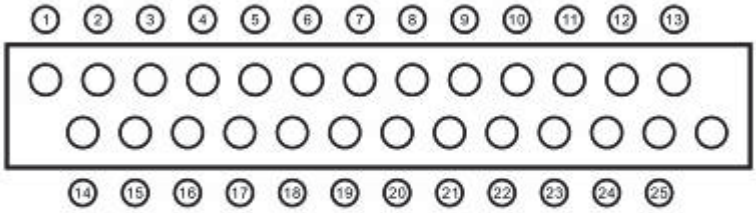
Step 3. Turn on the master power for laser Marker

Step 4. Turn the PC or laptop on and ready for software installation

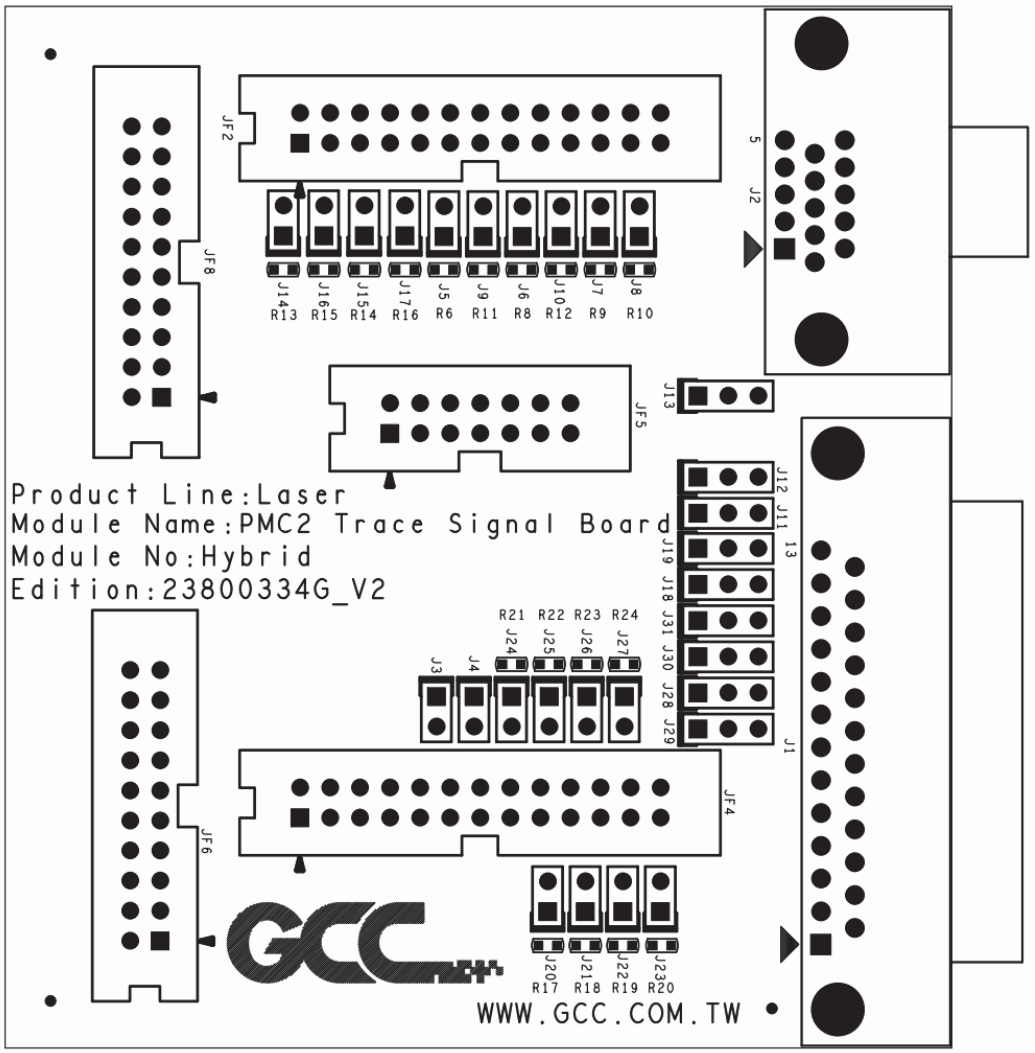
NOTE

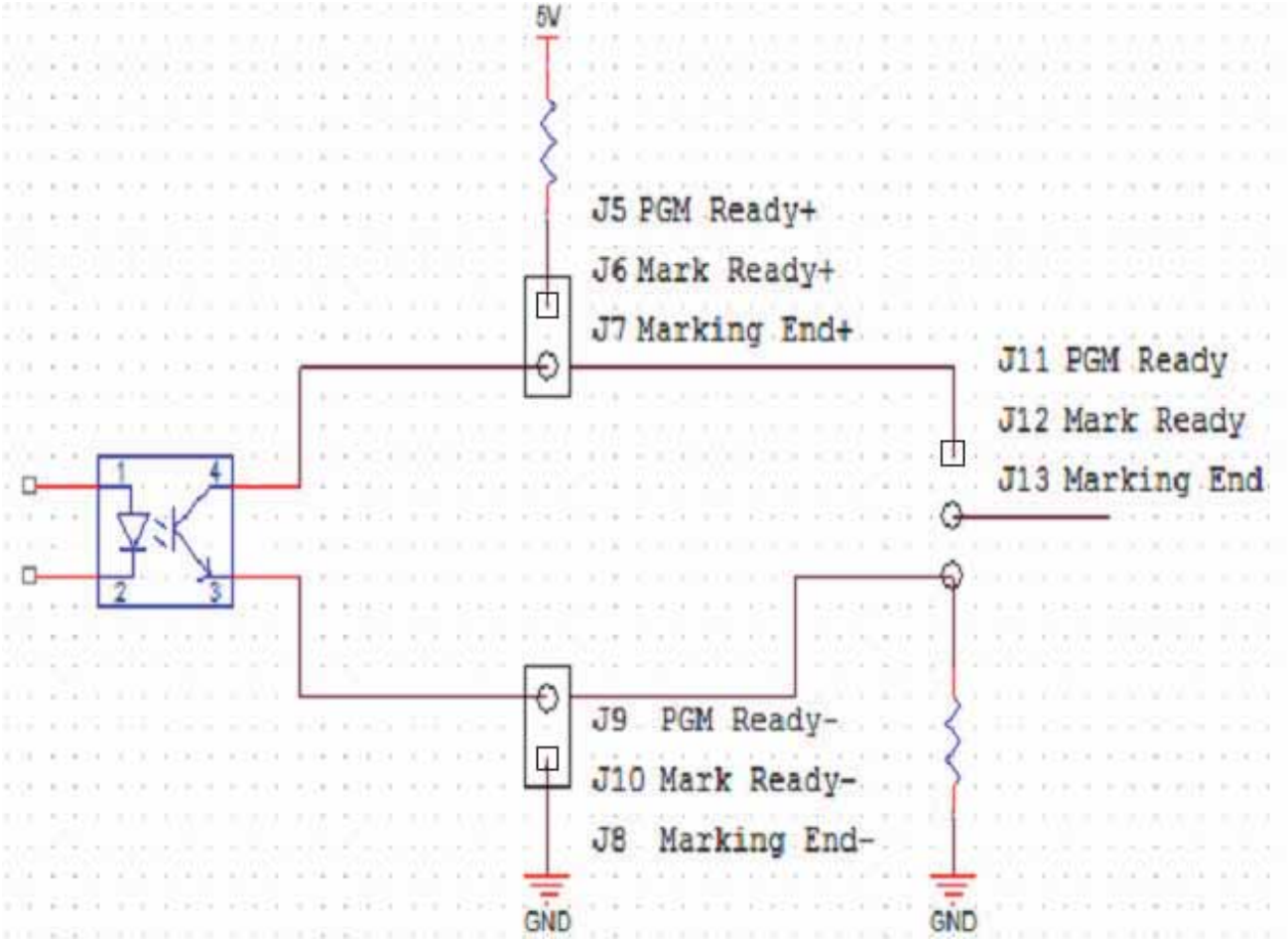
Every time you turn off the power, you are required to re-start G-Mark Advance marking software, because the connection between computer and control unit is disconnected when the power is off, so the marking software is unable to control the laser firing.

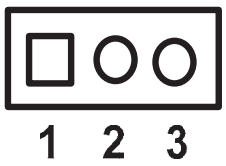
5.3 I/O interface Definitions

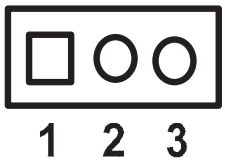
Pin	Name	Pin Diagram
1	5V	
2	Output 0	
3	Output 1	
4	Output 2	
5	Output 3	
6	Output 4	
7	Input 0	
8	Input 1	
9	Input 2	
10	Input 3	
11	Input 4	
12	PGM Ready	
13	Mark Ready	
14	Marking End	
15	Pulse R+	
16	Pulse R-	
17	Dir R+	
18	Dir R-	
19	Home	
20	Inposition	
21	Limit P	
22	Limit N	
23	Start	
24	Stop	
25	Gnd	

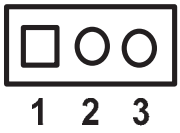
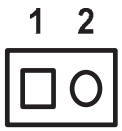
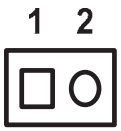
Jumper Settings & Functions

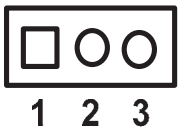
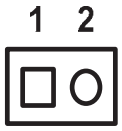
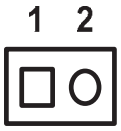


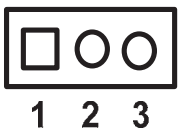
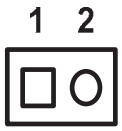
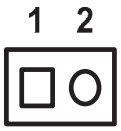


Pin Layout & Connection	Functions of Start (i.e. J18 Pin-2)
J18 (Start)	
	
1-2 Short	Positive level trigger for Start.
2-3 Short	Negative level trigger for Start.

Pin Layout & Connection	Functions of Stop (i.e. J19 Pin-2)
J19 (Stop)	
	
1-2 Short	Positive level trigger for Stop.
2-3 Short	Negative level trigger for Stop.

Pin Layout & Connection			Functions of PGM Ready (i.e. J11 Pin-2)
J11 (PGM Ready)	J5	J9	
			
1-2 Short	1-2 Short	1-2 Short	1) PGM Ready logic low (0) as G-Mark initiated. 2) PGM Ready logic high (1) as G-Mark not initiated.
2-3 Short	1-2 Short	1-2 Open	1) PGM Ready logic high (1) as G-Mark initiated. 2) PGM Ready logic low (0) as G-Mark not initiated.

Pin Layout & Connection			Functions of Marking End (i.e. J13 Pin-2)
J13 (Marking End)	J7	J8	
			
1-2 Short	1-2 Short	1-2 Short	1) Marking End logic high (1) as G-Mark initiated. 2) Marking End logic high (1) as enter G-Mark execution screen. 3) Marking End logic high (1) as laser marking activated. 4) Marking End logic low (0) as laser marking completed. 5) Marking End logic high (1) as G-Mark quitted.
2-3 Short	1-2 Short	1-2 Open	1) Marking End logic low (0) as G-Mark initiated. 2) Marking End logic low (0) as enter G-Mark execution screen. 3) Marking End logic low (0) as laser marking activated. 4) Marking End logic high (1) as laser marking completed. 5) Marking End logic low (0) as G-Mark quitted.

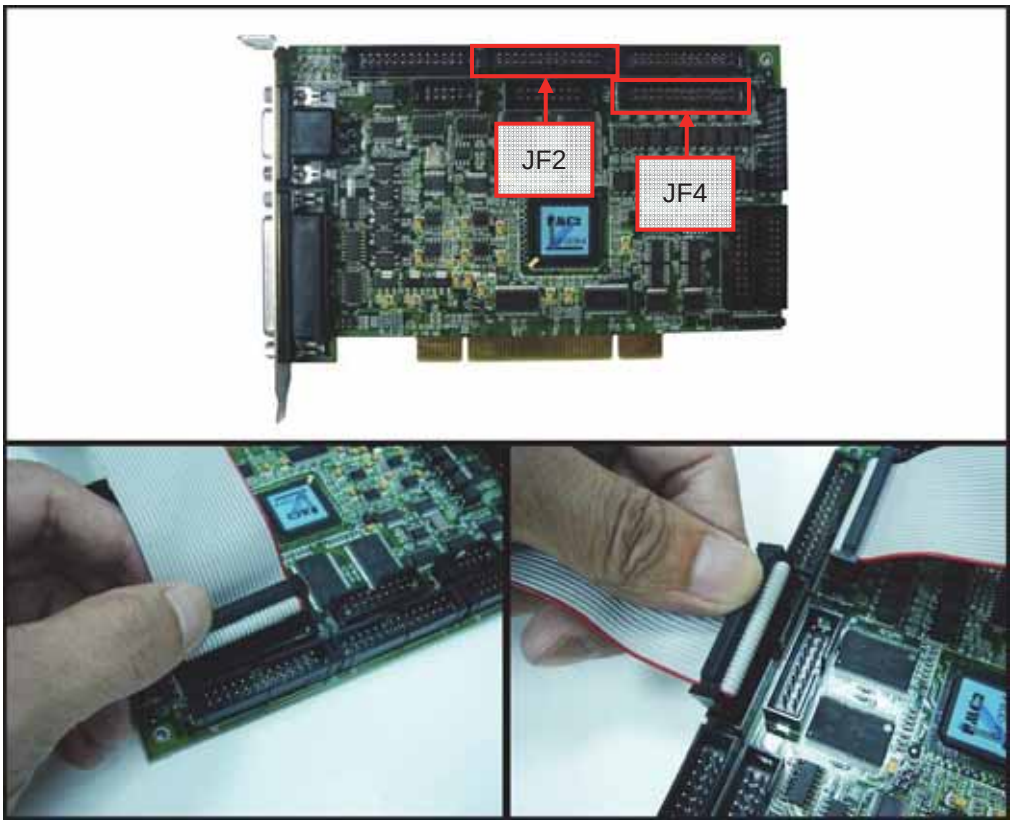
Pin Layout & Connection			Functions of Mark Ready (i.e. J12 Pin-2)
J12 (Mark Ready)	J6	J10	
			
1-2 Short	1-2 Short	1-2 Short	1) Mark Ready logic high (1) as G-Mark initiated. 2) Mark Ready logic low (0) as enter G-Mark execution screen. 3) Mark Ready logic high (1) as laser marking activated. 4) Mark Ready logic low (0) as laser marking completed. 5) Mark Ready logic high (1) as G-Mark quitted.
2-3 Short	1-2 Short	1-2 Open	1) Mark Ready logic low (0) as G-Mark initiated. 2) Mark Ready logic high (1) as enter G-Mark execution screen. 3) Mark Ready logic low (0) as laser marking activated. 4) Mark Ready logic high (1) as laser marking completed. 5) Mark Ready logic low (0) as G-Mark quitted.

5.4 I/O Interface Installations

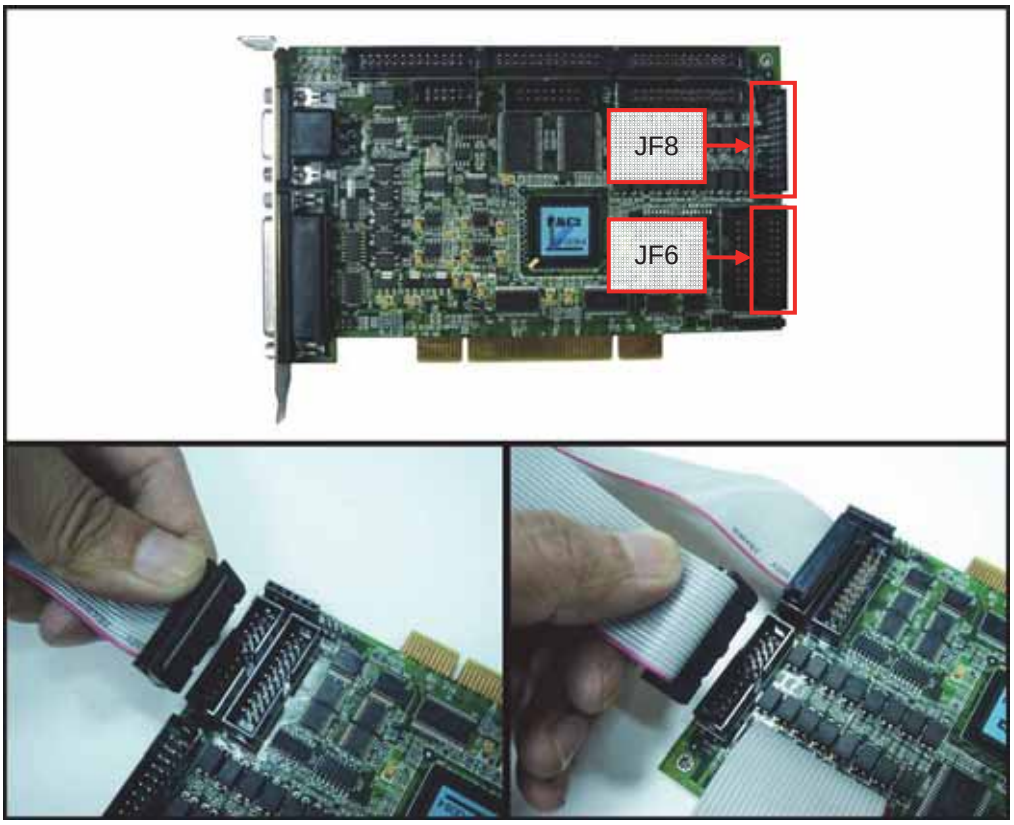
1) Remove the following items from the accessory box

2) Remove the PMC2 card from the computer (if it is already installed)

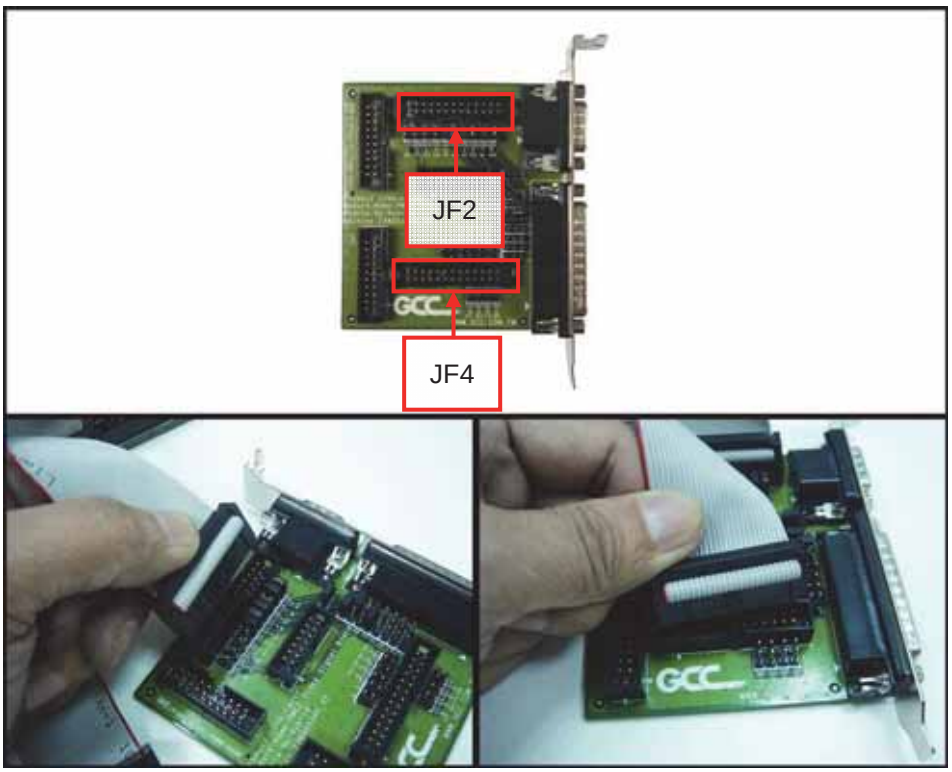
3) Connect the two 26 Pin Cables to the JF2 and JF4 slots of the PMC2 board



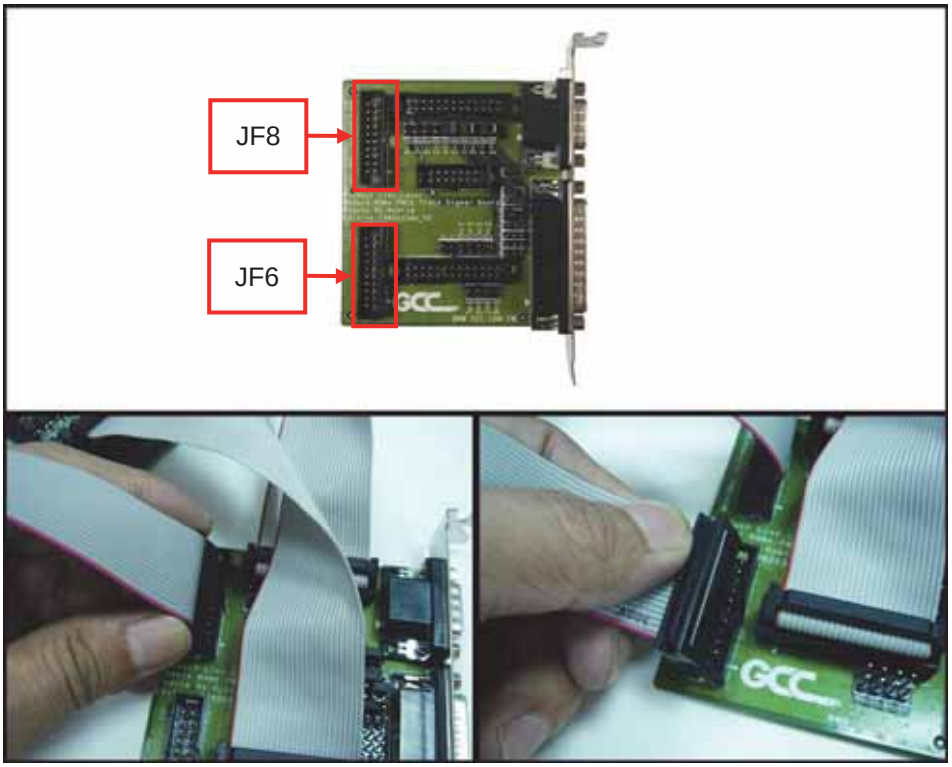
4) Connect the two 20 Pin Cables to the JF6 and JF8 slots of the PMC2 board



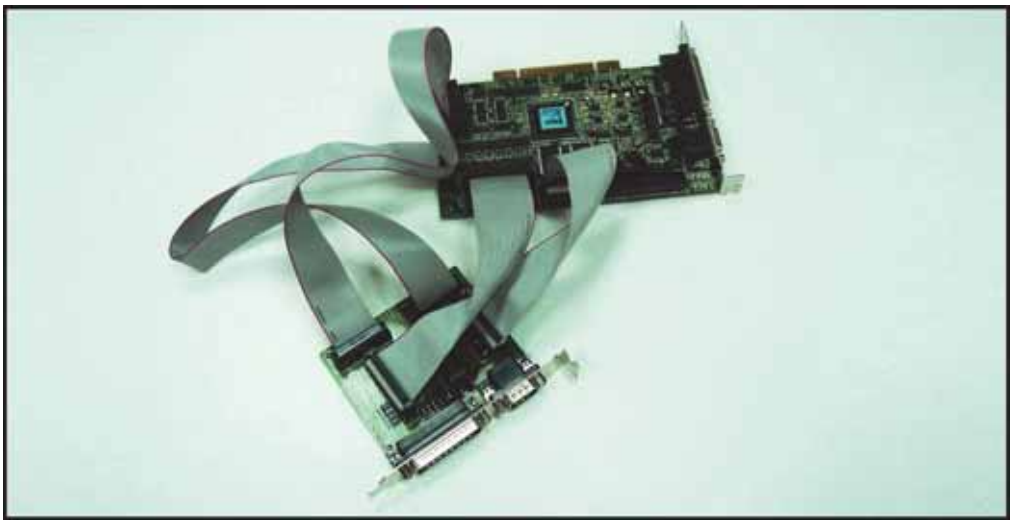
5) Connect the other side of the 26 Pin cables to the JF2 and JF4 slots on the PMC2 Signal Trace Board Assembly



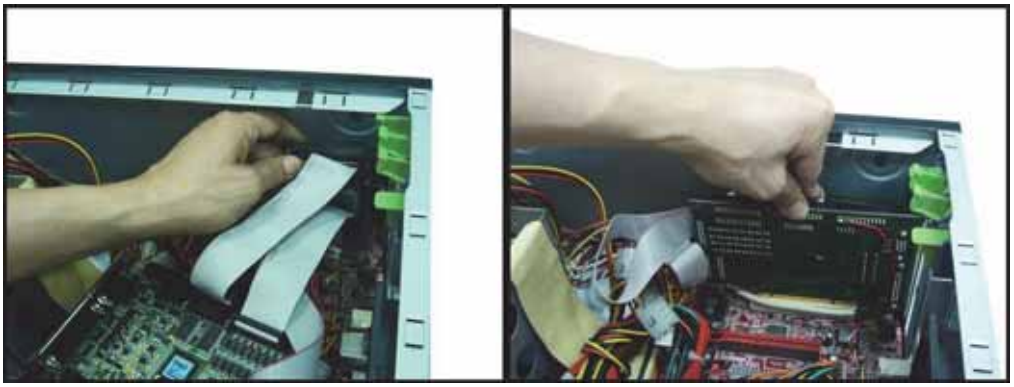
6) Connect the other end of the 20 pin cables to the JF6 and JF8 slots of the PMC2 Signal Trace Board Assembly



7) Connections of the PMC2 board and PMC2 Signal Trace Board Assembly Completed

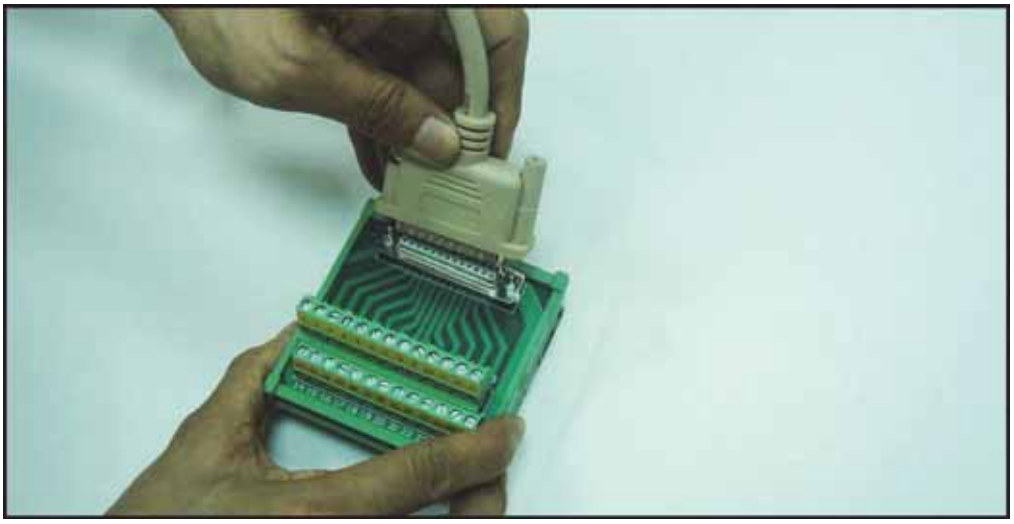


8) Insert the PMC2 into a PCI slot on the computer and assemble the PMC2 Signal Trace Board Assembly to the computer

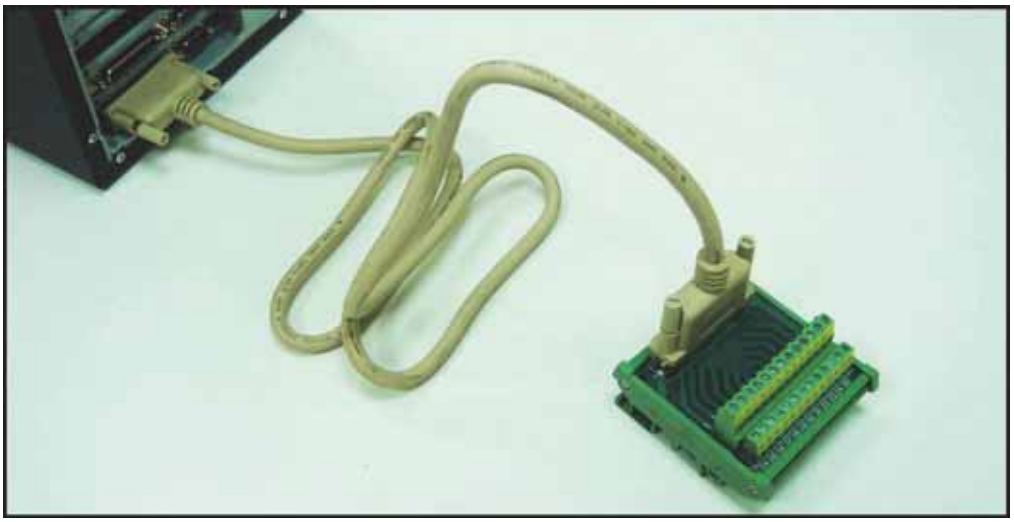


9) Connect a D-Sub 25 pin cable to the connector on the PMC2 Signal Trace Board Assembly

10) Connect the D-Sub 25 pin cable to the I/O interface



11) Installation completed



Chapter 6

Software Setup

Recommended Computer Configuration

Software Installation for Windows System

Software Installation for MAC System

6.1 Recommended Computer Configuration

The StellarMark is able to accommodate Laptop and compatible PC operating systems. Both the machine and G-Mark Basic / G-Mark Library™ software were designed to work best using a Windows based system with the following minimum requirements.

Computer Configuration

- **CPU** Intel Pentium, 1GHz or above
- **DRAM** 1GB RAM or above
- **CDROM** One CD-ROM disk drive
- **HDD** 500 MB of free hard drive space
- **SVGA** Super VGA display (1204 x 768 min. resolution)
- **Interface** PC or Laptop

G-Mark / Library marking software

- Software is designed for Windows XP / 2000 / Vista / Windows 7 operating system

6.2 Software Installation for Windows System

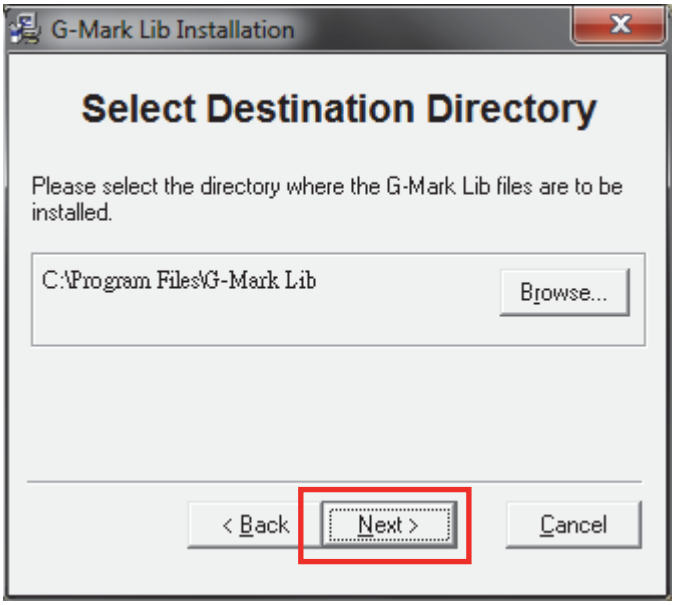
Please perform the following steps:

Step 1. Take out the G-Mark installation CD from the accessories kit

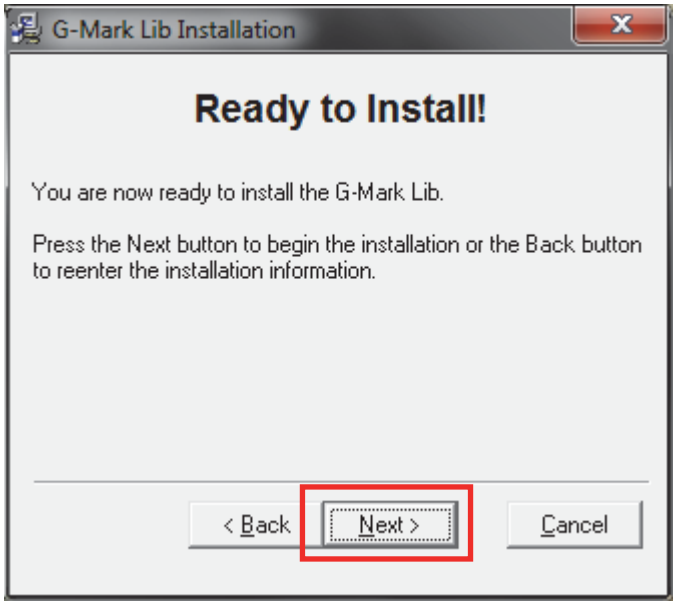
Step 2 Insert the G-Mark installation CD into the CD-ROM drive
Wait a few seconds for the CD Manager to begin the Setup automatically

Step 3. Click on 32 bit or 64 bit version from the menu of the G-Mark installation CD depending on your operating system

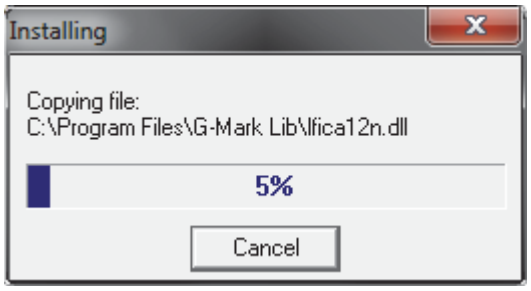
Step 4. Set the destination directory and click "Next>"



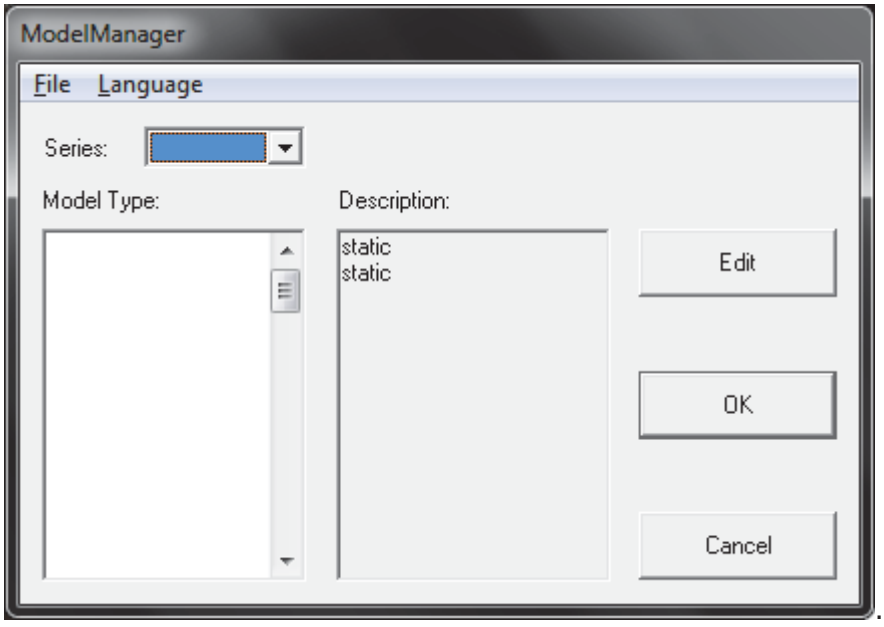
Step 5. Select "Next>"



Step 6. Installing

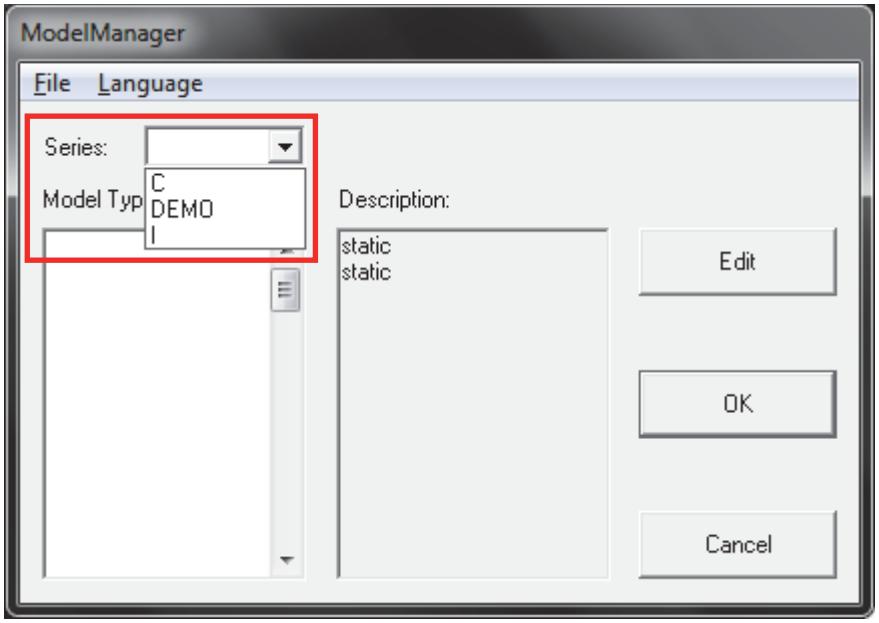


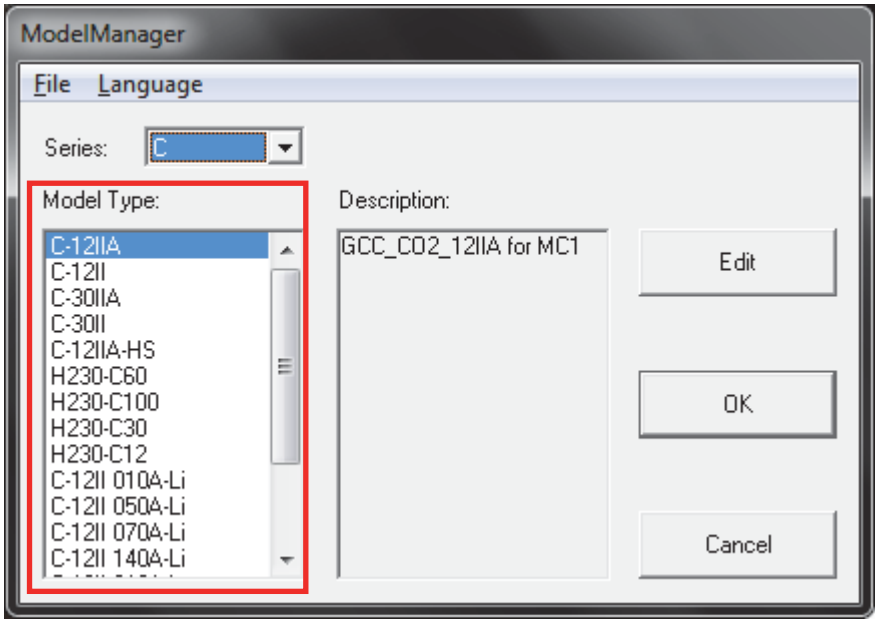
Step 7. At 95% completion of the installation, the ModelManger window will show up



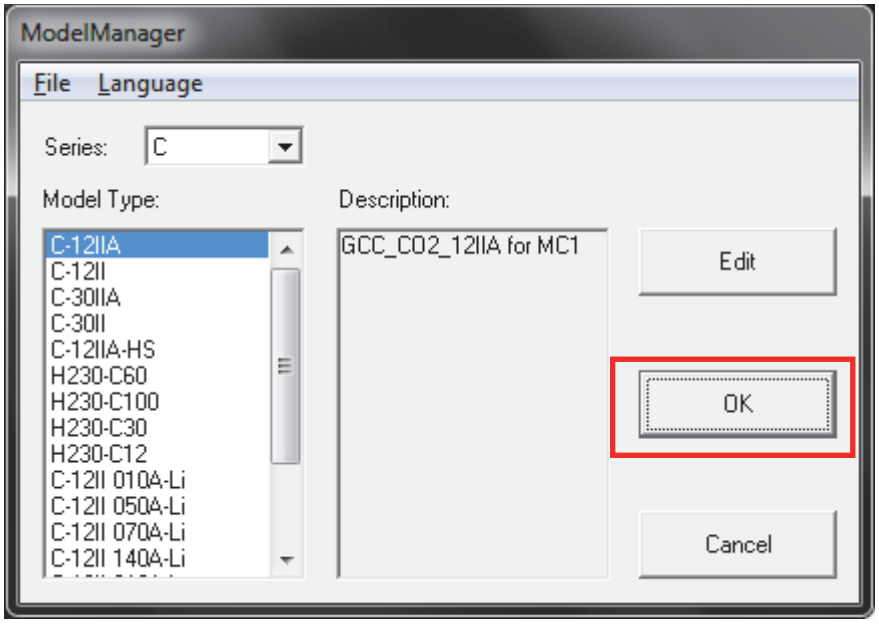
.

Step 8. Select your series & model type

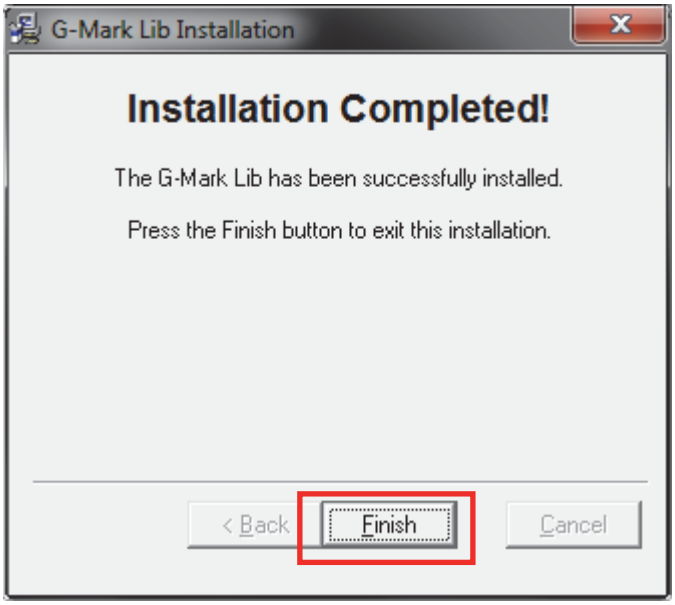




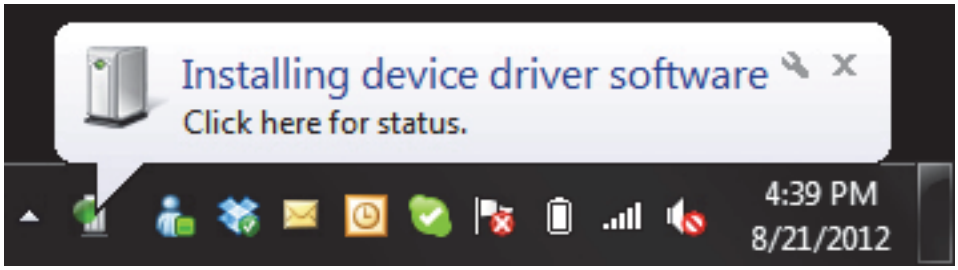
Step 9. Click “OK”



Step 10. Click “Finish” to complete the installation



Step 11. Once the installation is completed, you will find “Laser marking controller” at the lower right hand corner on your computer screen, this indicates the computer is able to communicate with StellarMark.



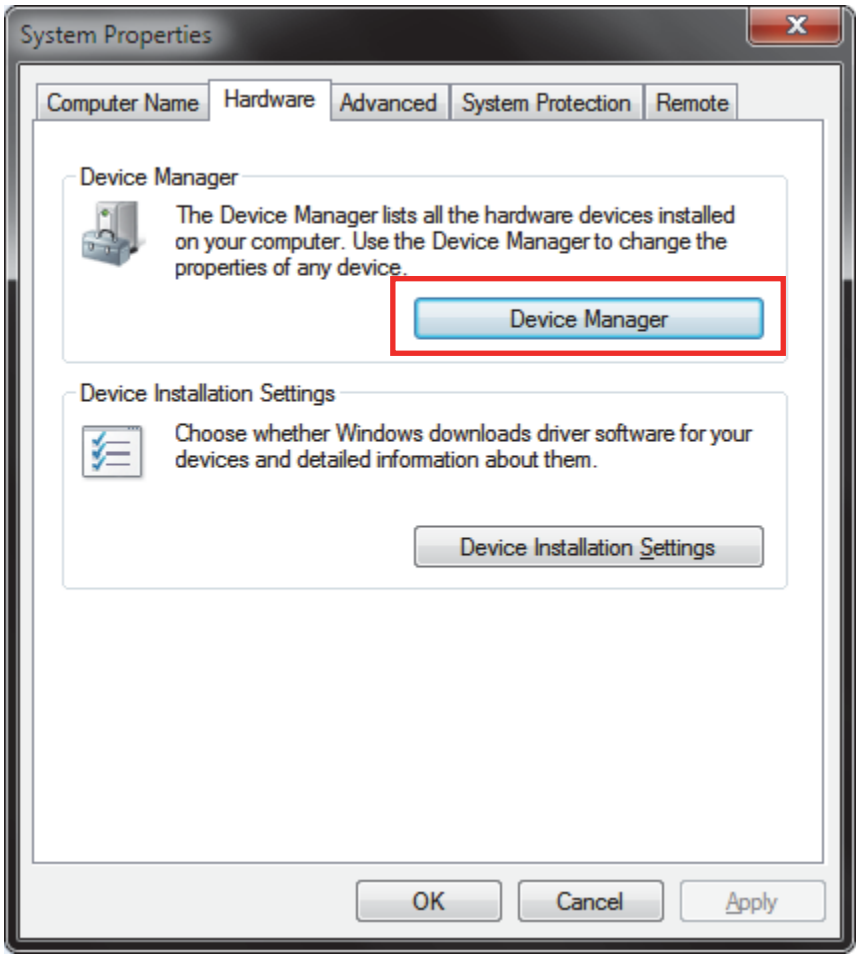
Step 12. Open a new G-Mark file

NOTE

If “Laser marking controller” is not showing at the lower right hand corner of your computer screen, G-Mark will not be able to be activated.
Please perform the following steps:

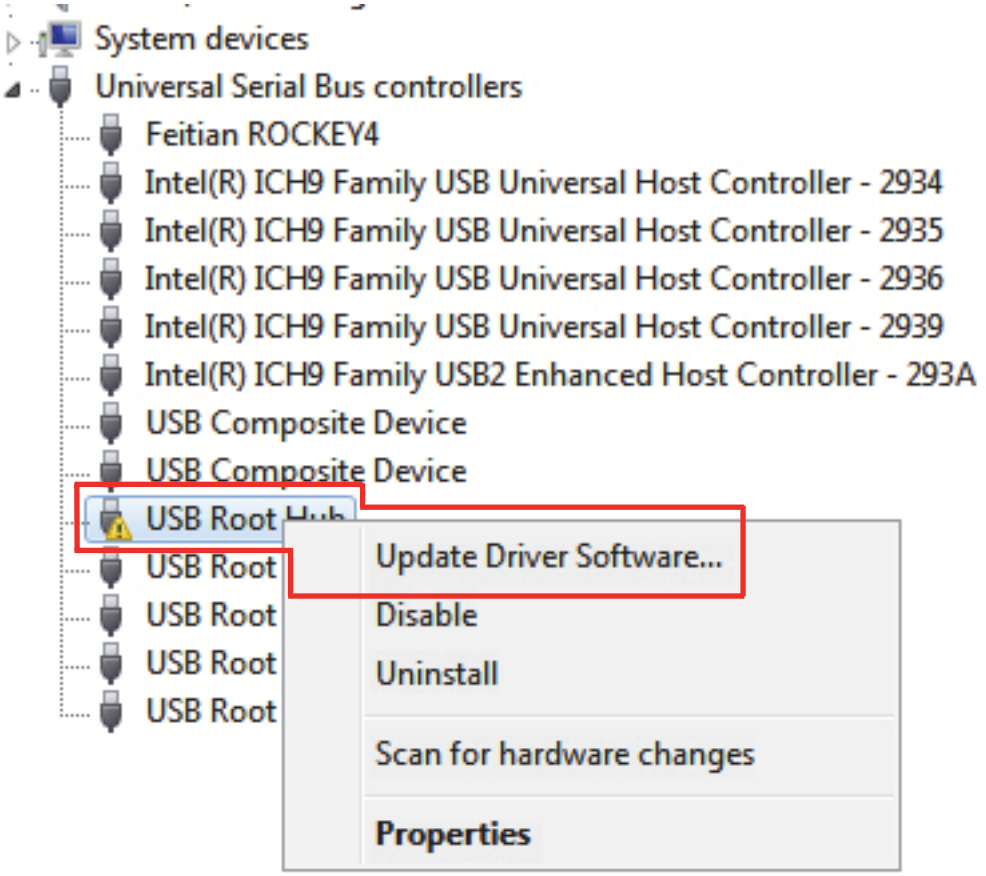
A. Please go to “Control” and click on “System”

B. Then click on “Hardware” and go to the “Device manager”

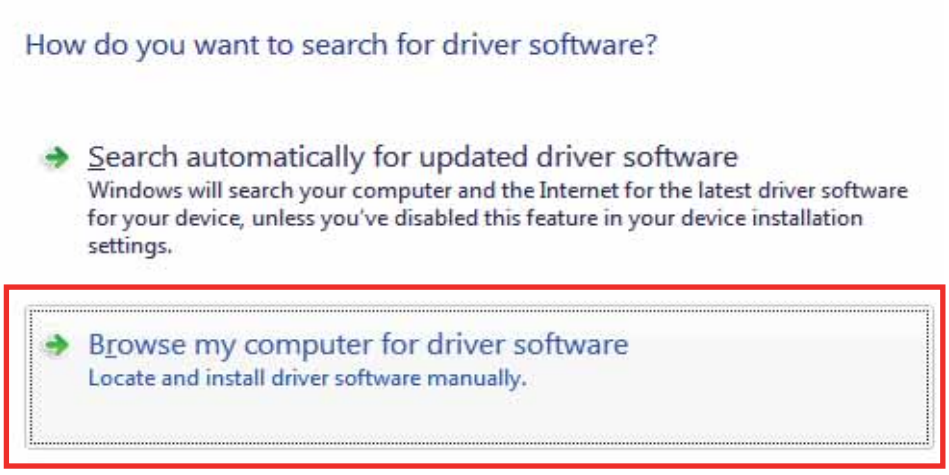


C. Please check if there is any “!” USB device from the below chart:

D. Then click on “USB Driver’ and click on right mouse button and update the driver.

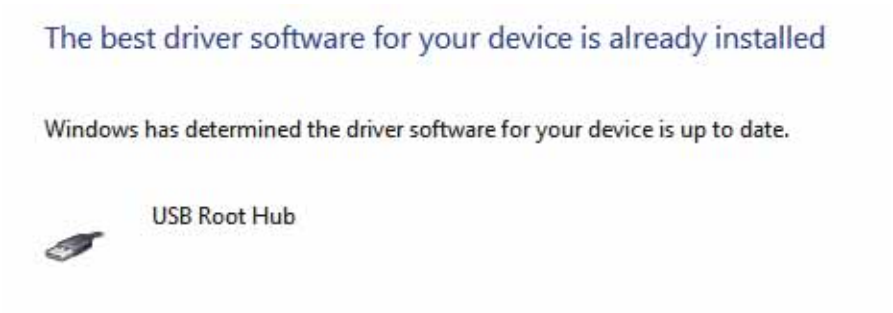


E. Click on ”Browse my computer for driver software”



F. Key in the specific path: “C:\Program Files\G-Mark Lib \Drivers\MC1. Then press “Next..

G. Press “Finish” and now you can activate the G-Mark software

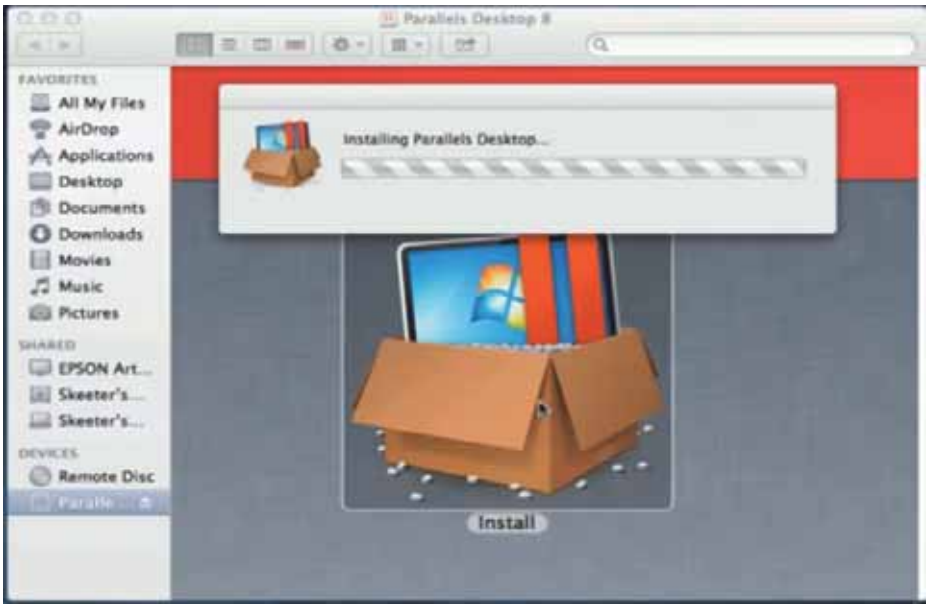


6.3 Software Installation for MAC System

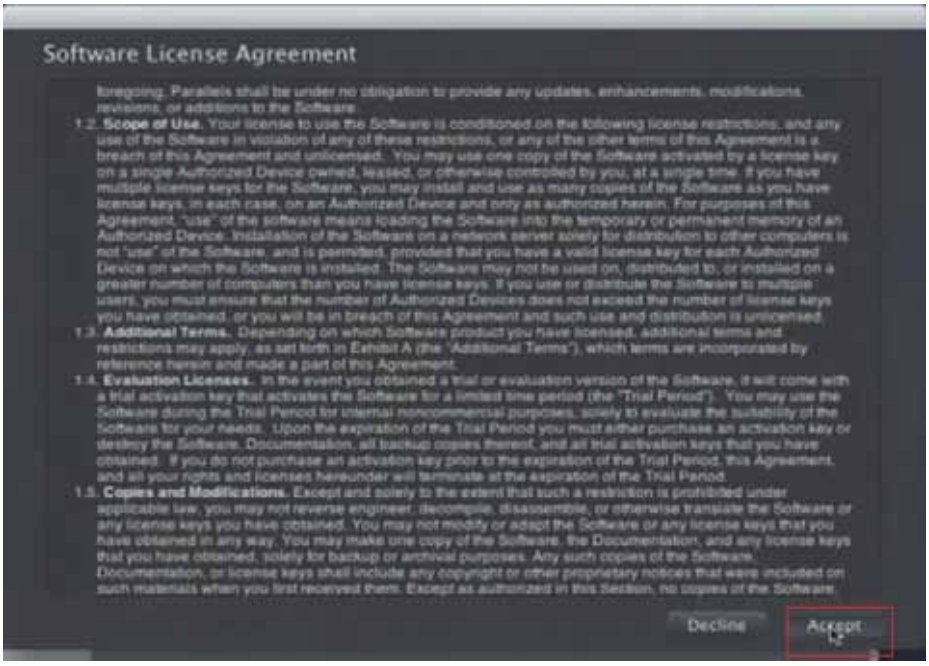
MAC users can use GCC StellarMark machines by purchasing the Parallels Desktop software which allows you to install Windows OS in MAC computers and run Windows based software under MAC computer and output with G-Mark.

Step 1. Purchase Parallels Desktops on its official website.

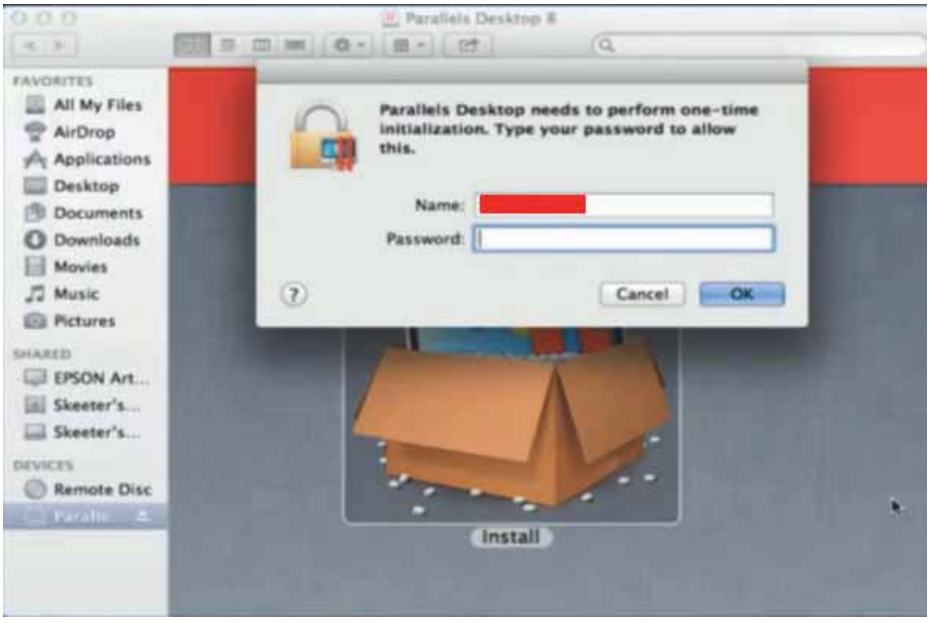
Step 2. Install Parallels Desktops under Mac OS environment.



Step 3. Read Software License Agreement and press “Accept” to continue installation

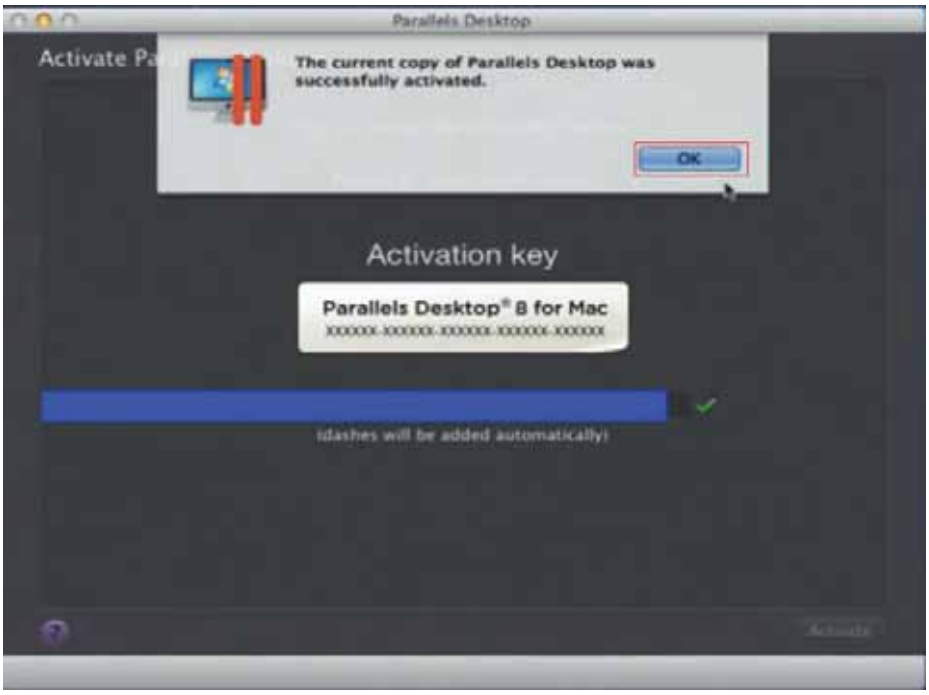


Step 4. Enter your Mac OS X User Name and Password then press “OK”

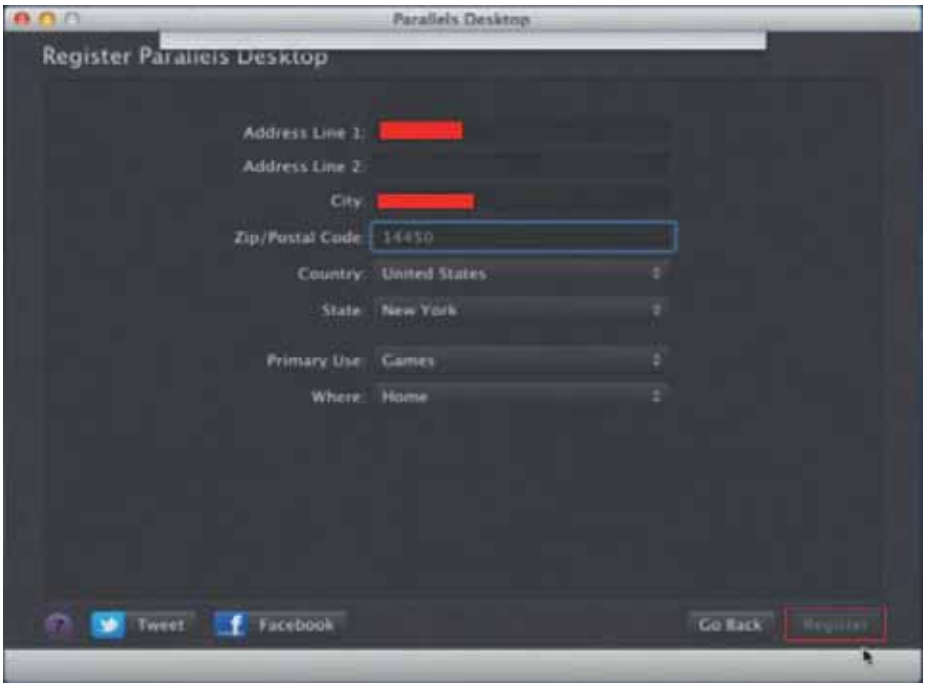


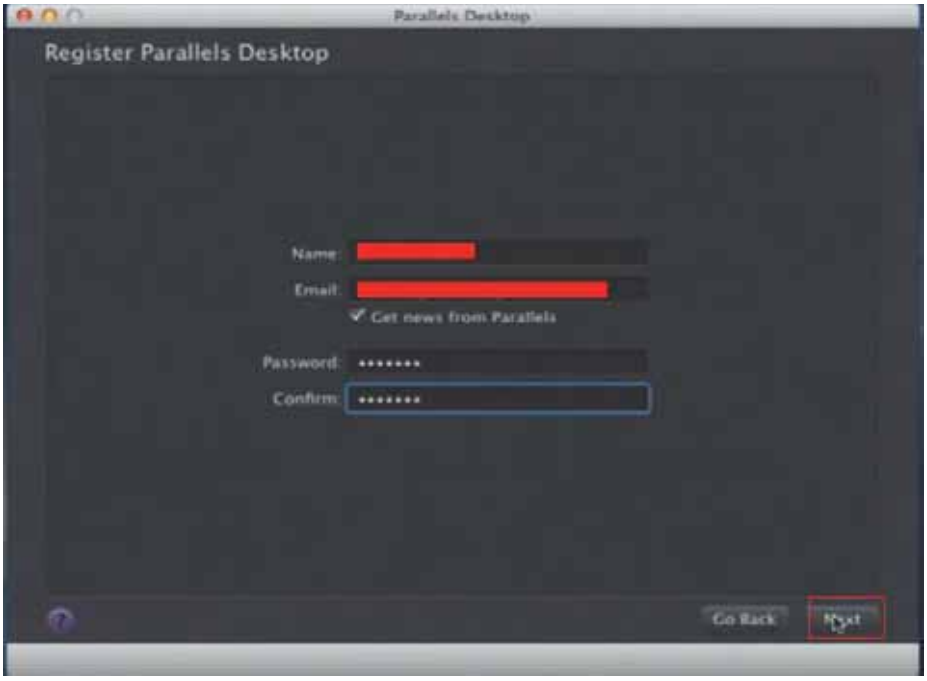
Step 5. Press “Active”

Step 6. Press “OK” when activation is complete.



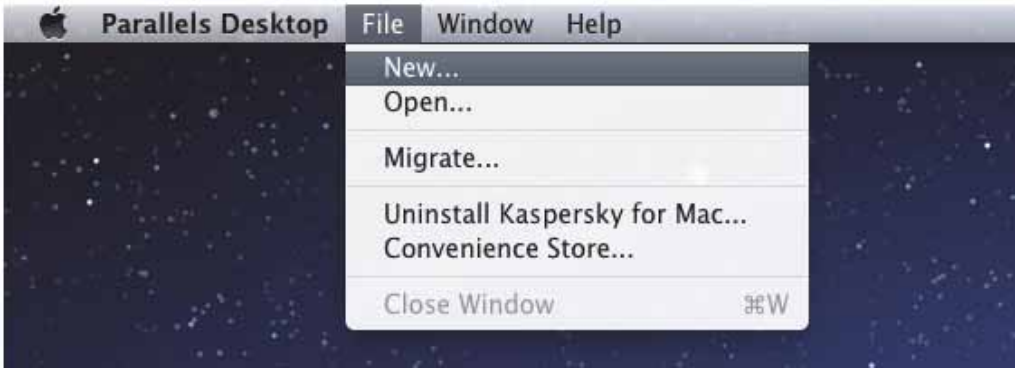
Step 7. Register Parallels Desktop





Step 8. Press “Register” and “OK” to complete the installation of Parallels Desktop.

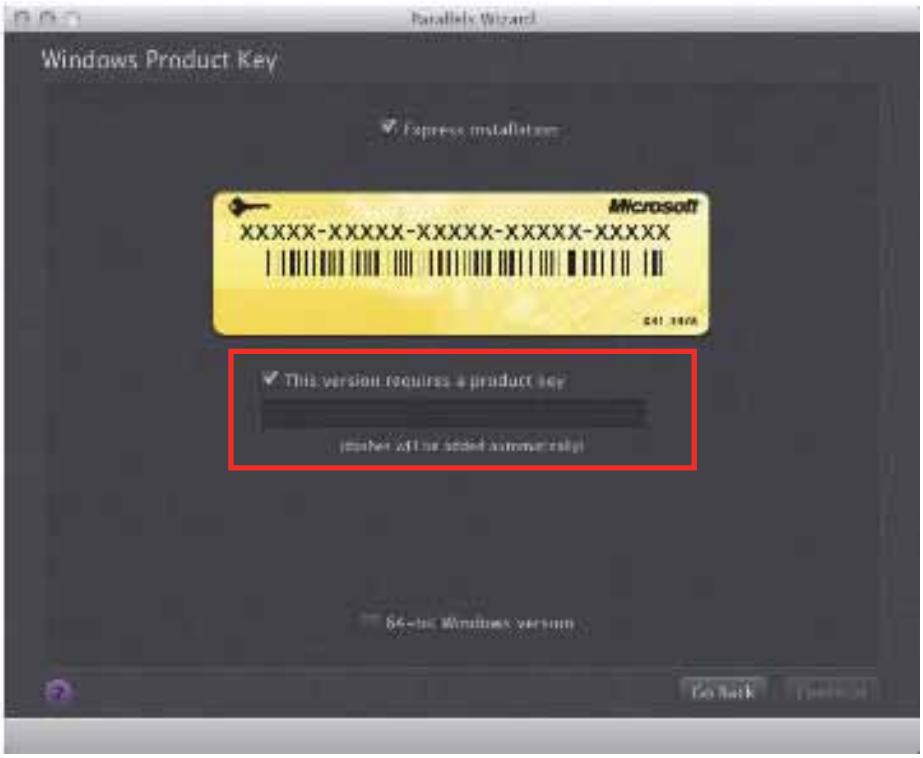
Step 9. Open **Parallels Desktop** (in the **Applications** folder) then choose **File** → **New**



Step 10. Press “Install Windows from DVD or image file” then press “continue” to install windows OS

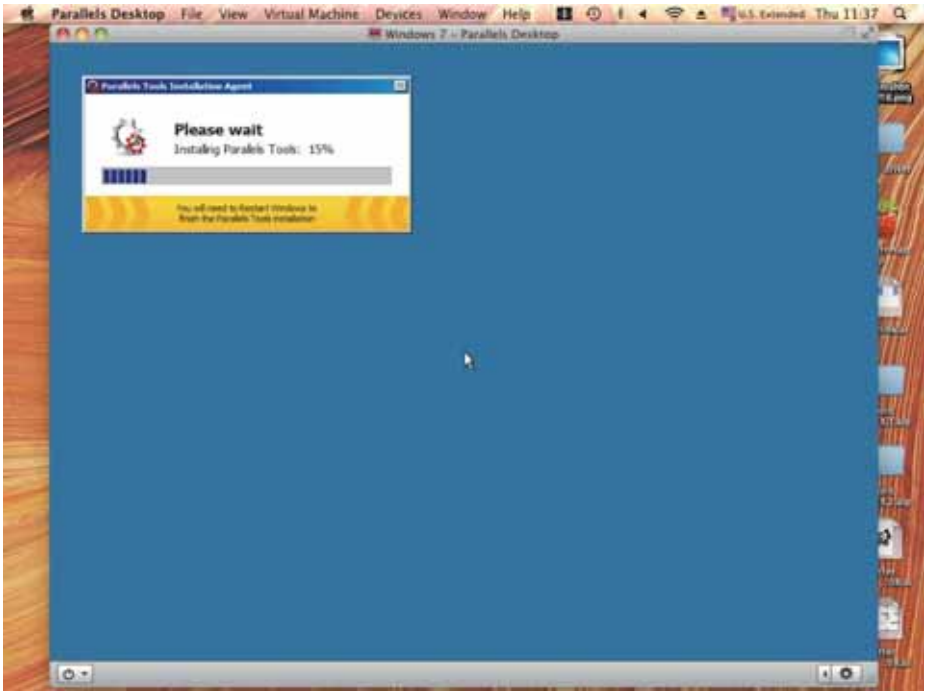
Step 11. Select CD-ROM drive with the Windows installation CD

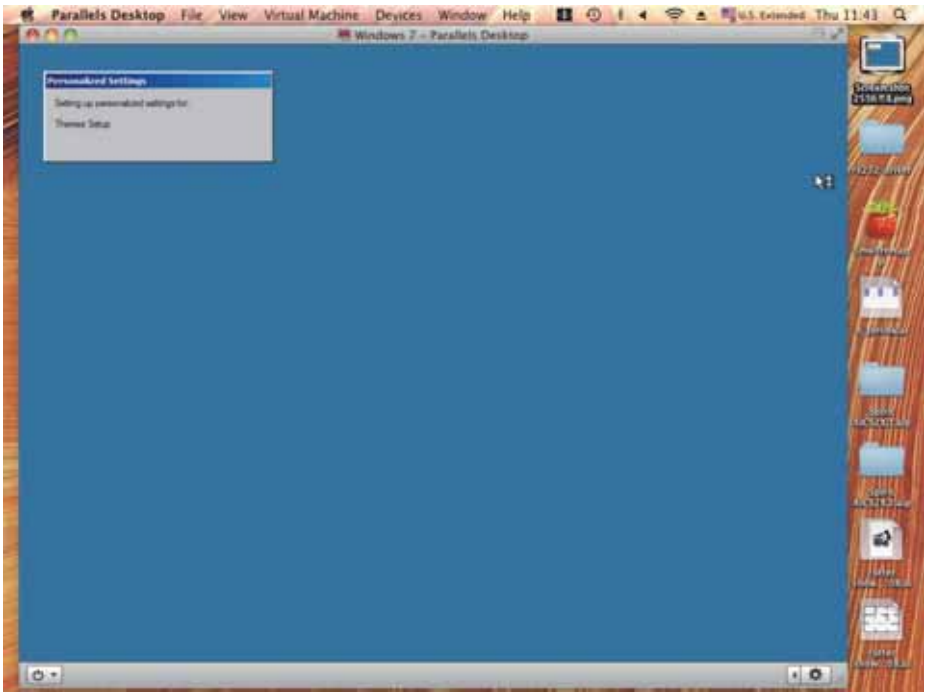
Step 12. Enter the Windows OS product key



Step 13. Select how you would like to run your Windows program.

Step 14. After the prior setting is complete the windows OS installation procedure will start automatically.





Step 15. Windows OS installation is complete then you can refer to “6.2 Software Installation for windows system” to install G-Mark / G-Mark Library.

Chapter 7

Lens Adjustment

Import Lens Parameter

Lens Parameter Card

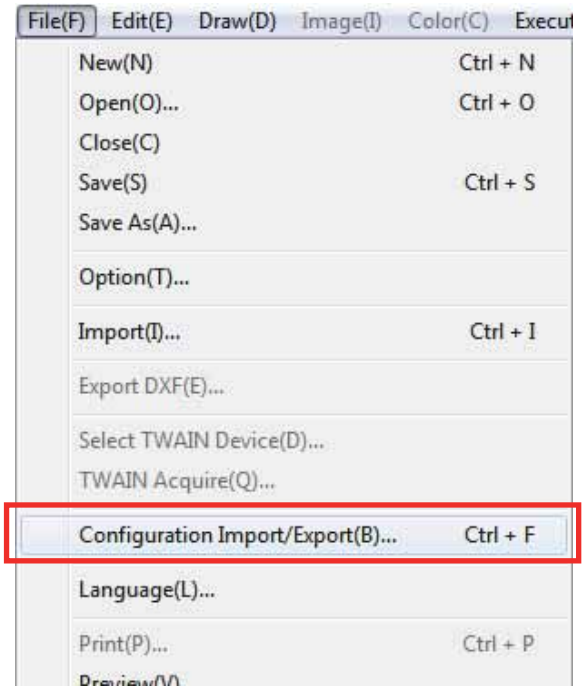
Lens Parameter Adjustment

7.1 Import Lens Parameter

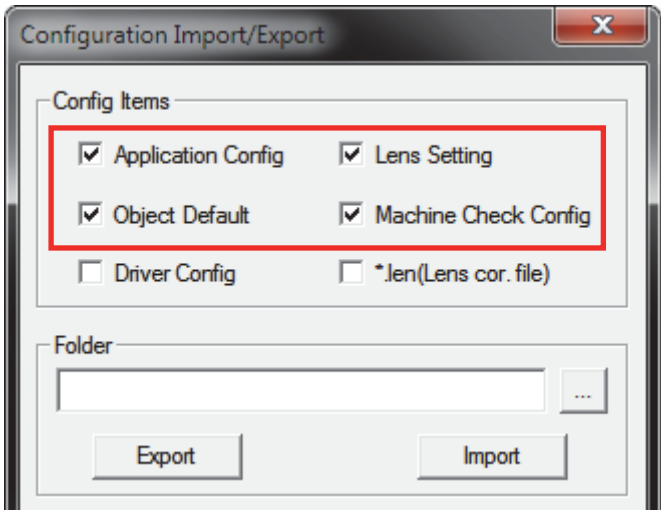
Please perform the following steps:

Step 1. Start the G-Mark program.

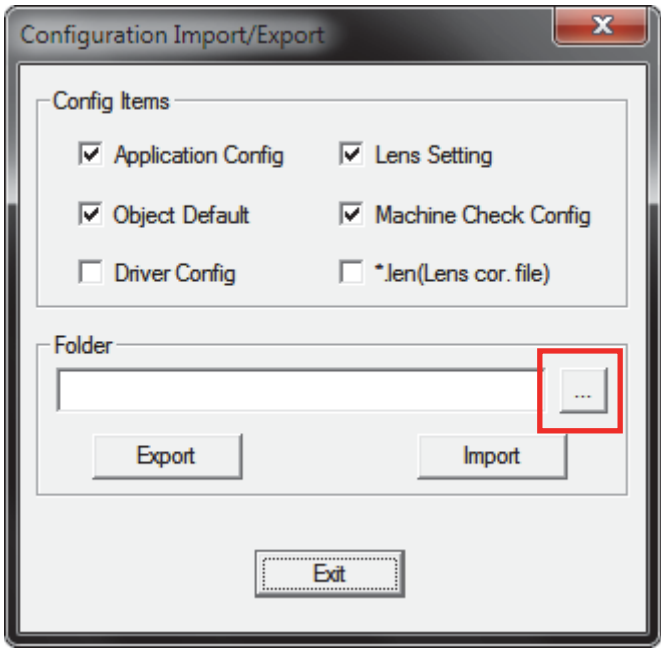
Step 2. Select File→Configuration Import/Export.



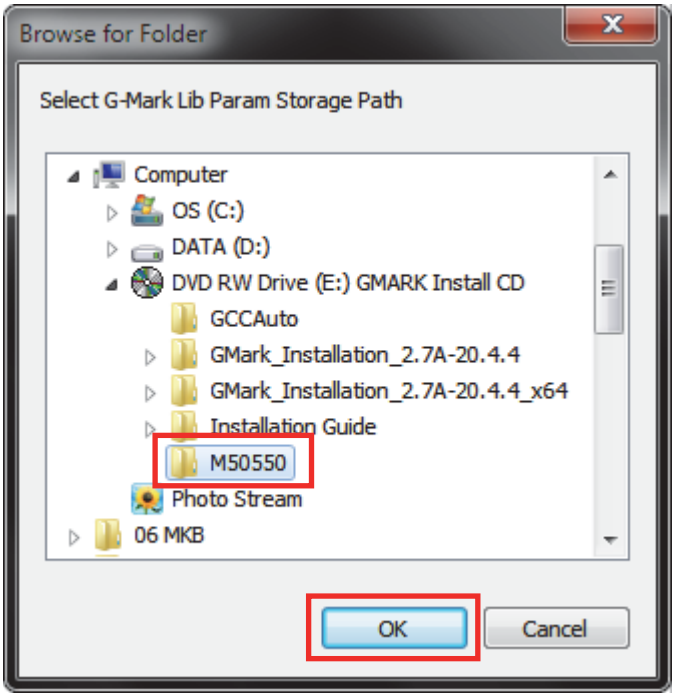
Step 3. Check the Application Config, Lens Setting, Object Default and Machine Check Config selections.



Step 4. Click on the Folder location icon shown below.

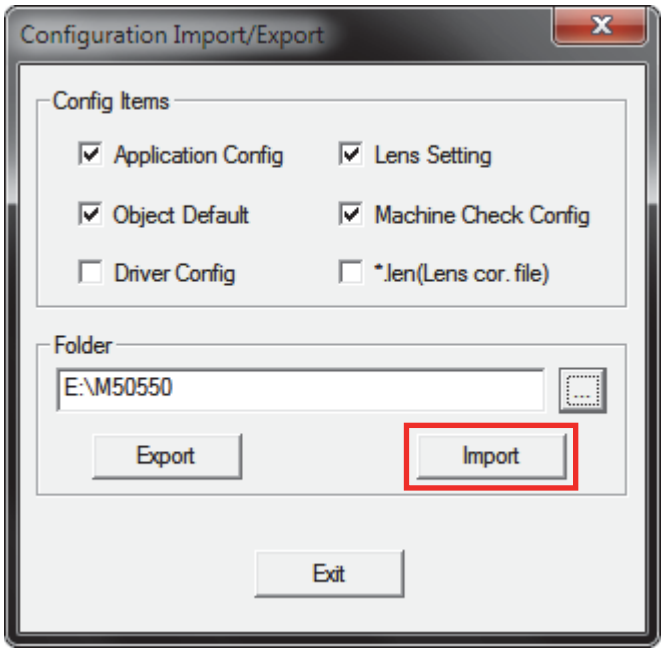


Step 5. Locate the Lens Parameter folder in the Installation CD and select OK. (The lens parameter folder is named with the serial number of your machine.).

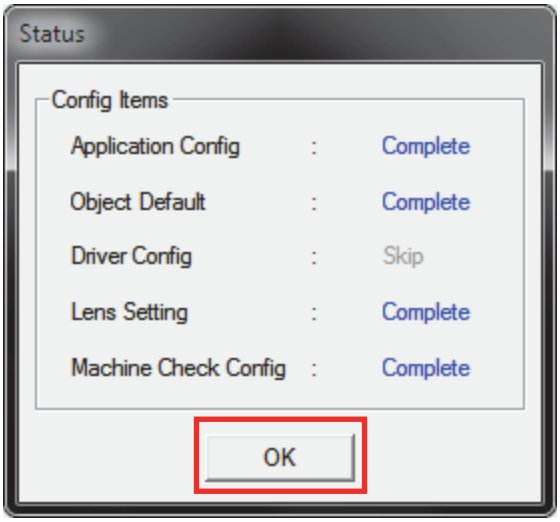


If there is no “Lens Parameter” folder found under G-Mark installation CD, please skip to follow ”7.2 Lens Parameter Card” instructions.

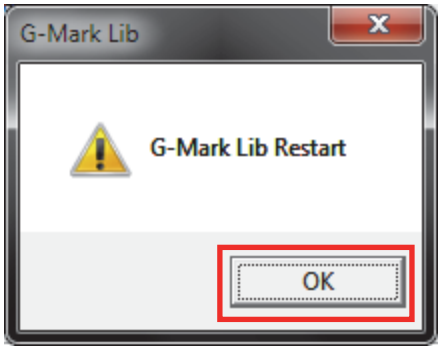
Step 6. Click the "Import" button.



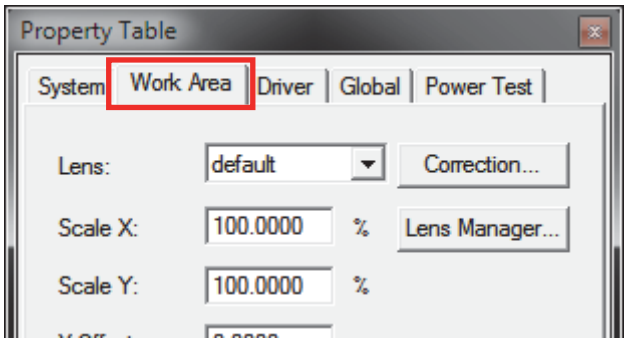
Step 7. Click on the "OK" button after the Status screen shows Complete.



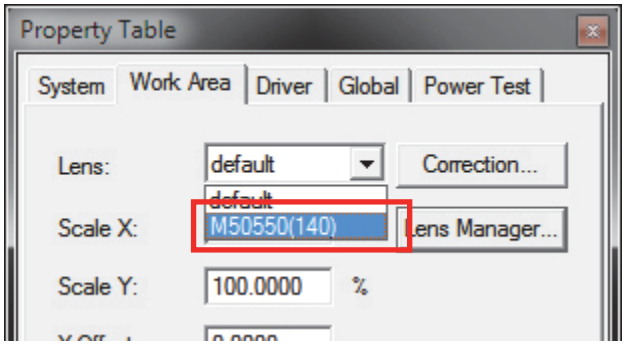
Step 8. Click on "OK" when the "Restart message prompts up.



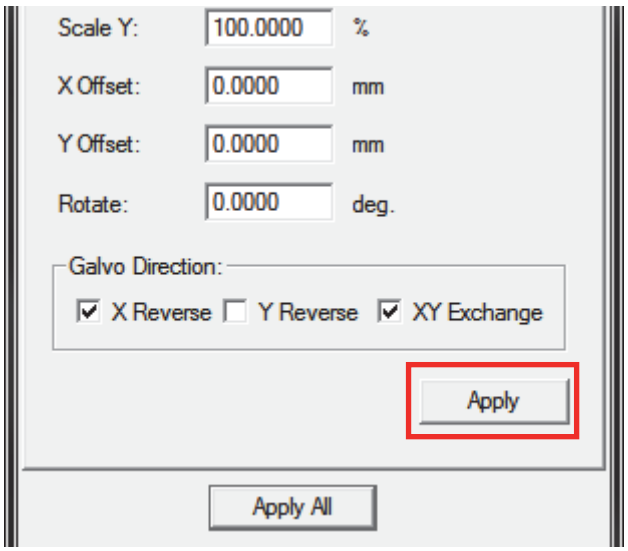
Step 9. Click on the "Work Area" Tab under the Property Table after G-Mark restarts.



Step 10. The Lens parameter can be found in the Lens list. (Named with the serial number of your machine.).



Step 11. Click on "Apply" after selecting the Lens and the settings will be loaded.



7.2 Lens Parameter Card

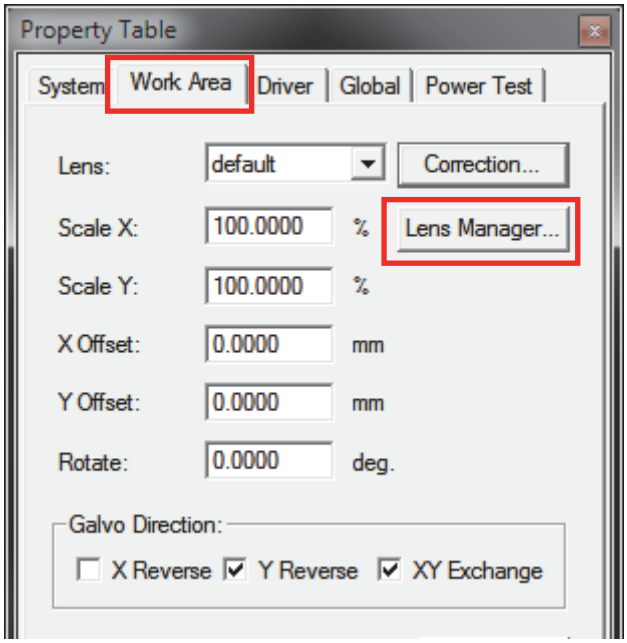
Before you start to operate the machine, the output scale of machine and the marking software must be adjusted to match each other.

Or the marking lines will be distorted or will have an improper scale of the marking content.

Step 1. Take out the lens parameter card from the accessory kit

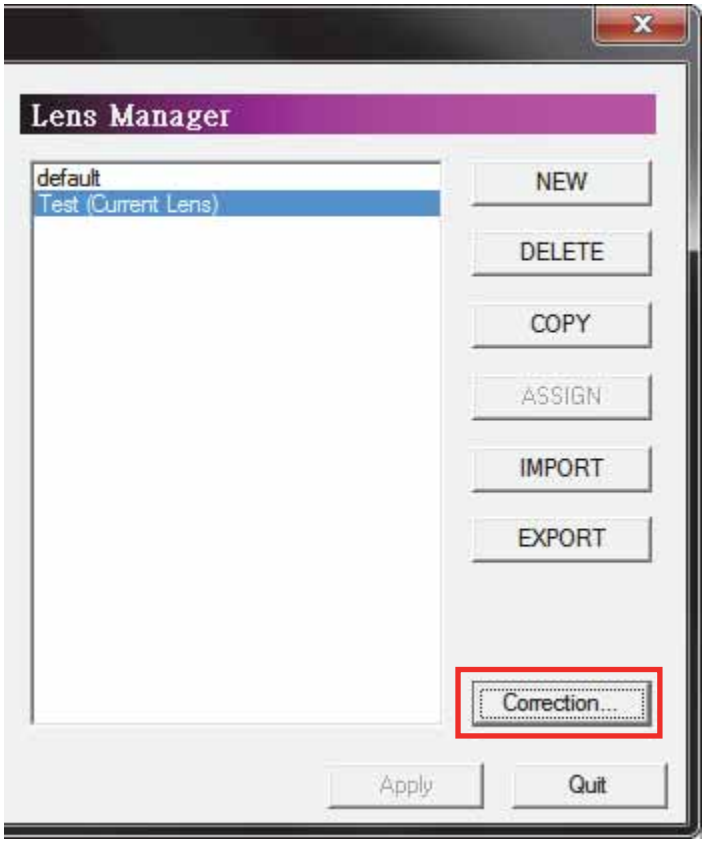
Step 2. Open G-Mark marking software

Step 3. Click on work area from property table and press “Lens Manager…”

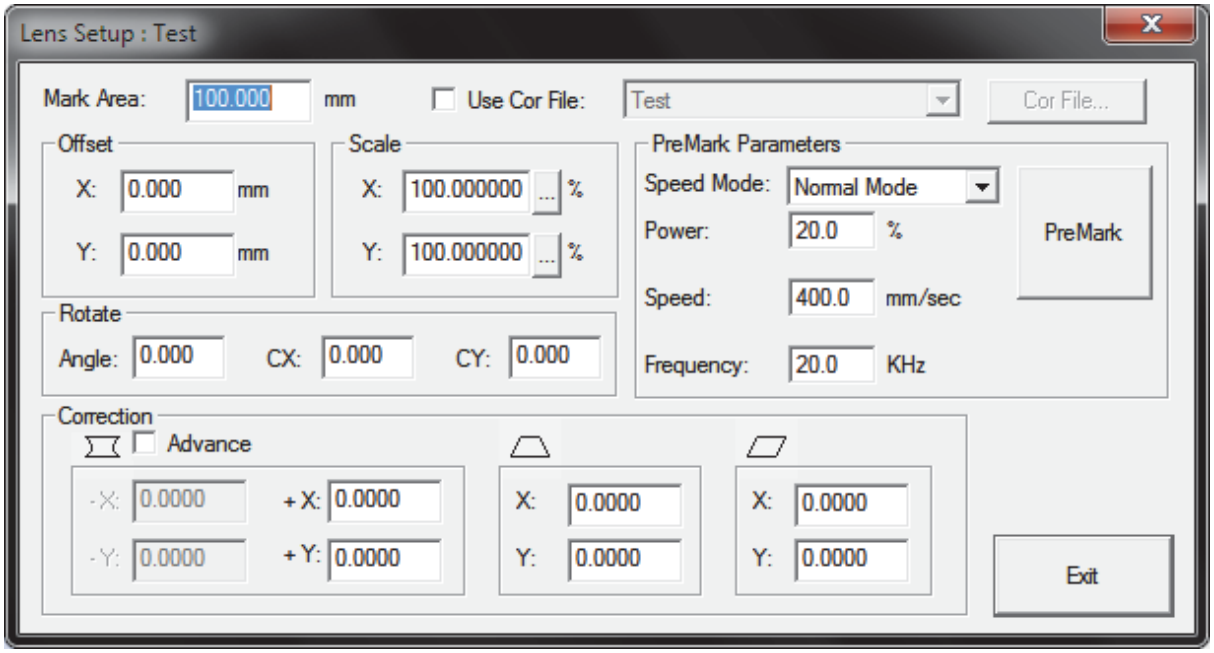


Step 4. Press “New” to create a new name for the lens and press “OK”

Step 5. Click “Correction…” to settings lens



Step 6. Fill in the numbers that are showing on the card to the below table. Press “Exit” to save the settings of the lens



NOTE

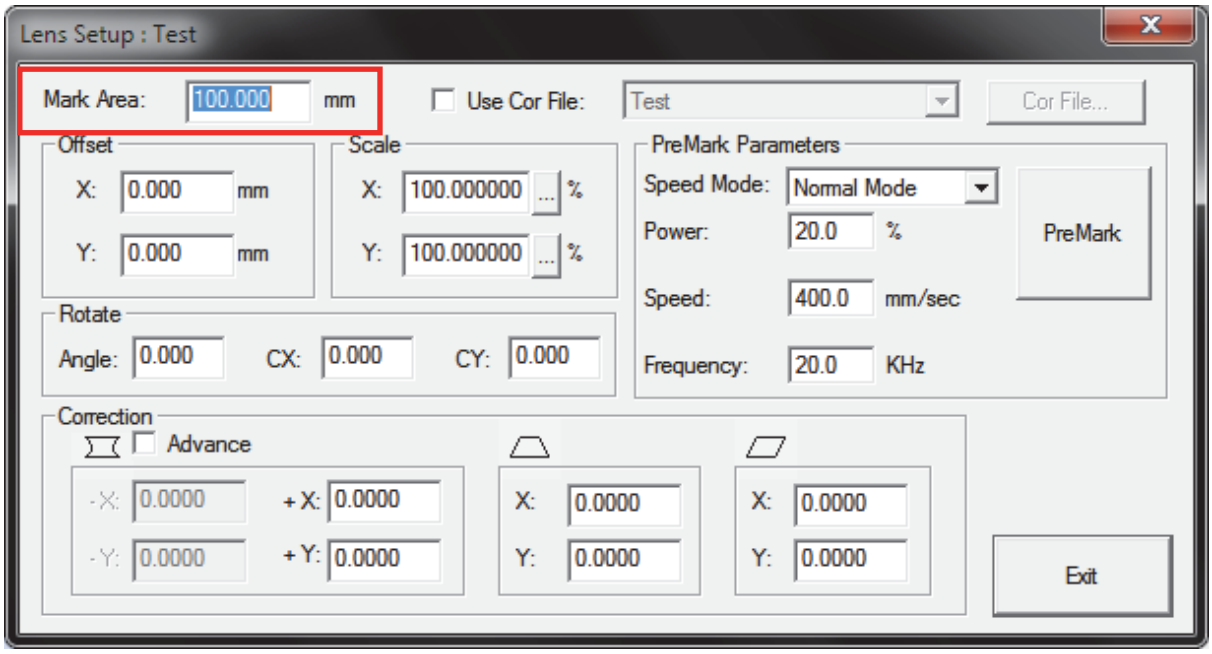
If the size of scan lens is changed, the lens parameter will be varied, too.

7.3 Lens Parameter Adjustment

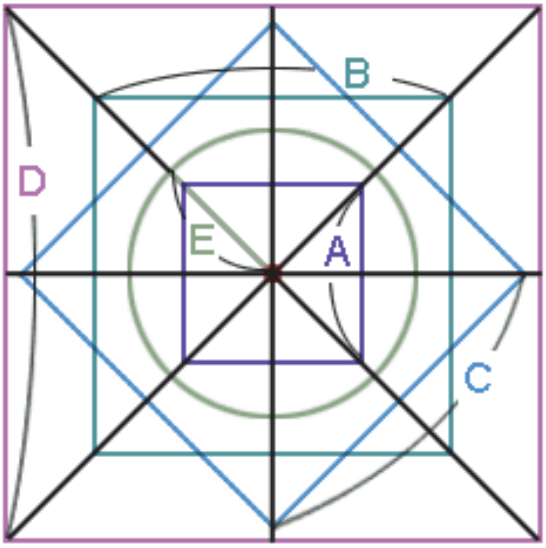
Please perform the following steps to find the appropriate lens parameter when changing a different scan field of scan lens:

Step 1. Create new name for the new lens.

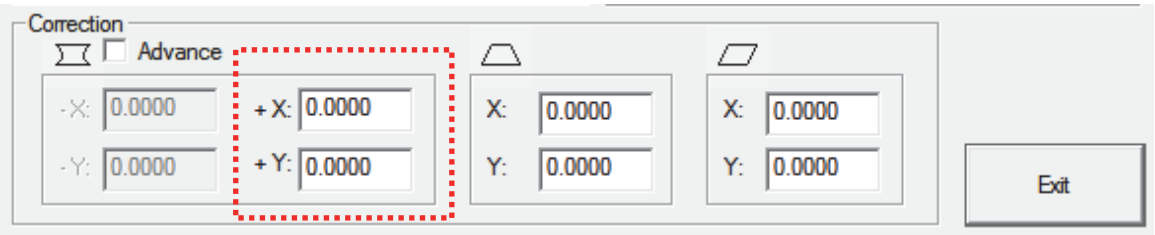
Step 2. Change the mark area and press “Exit” to save the settings



Step 3. Mark the below pattern and check the output quality.

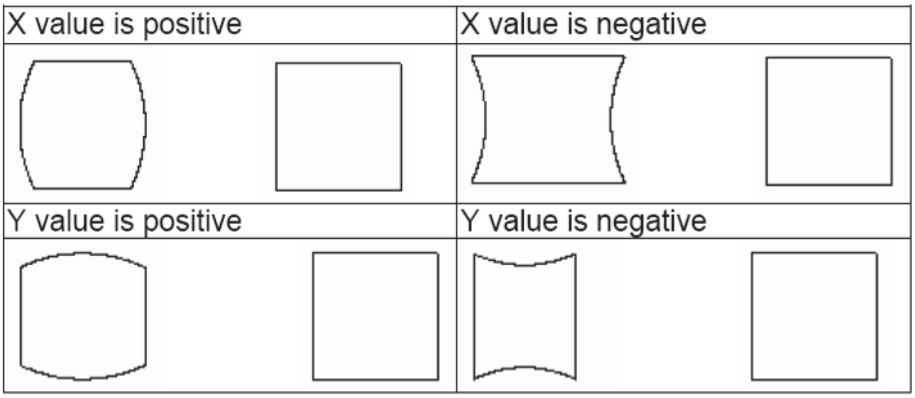


Step 4. If there is barrel square, go back to the “lens setup” to correct it.

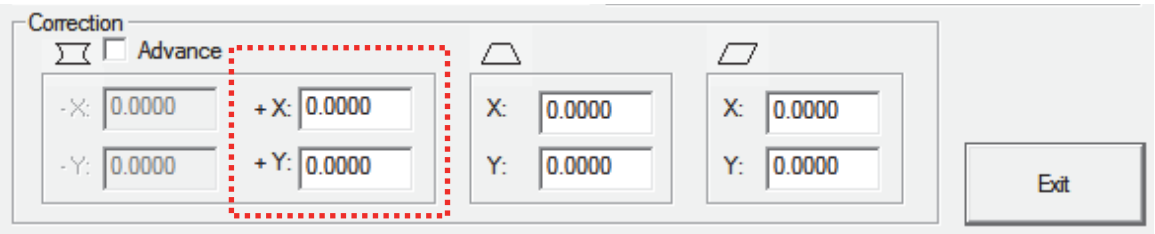


Step 5. If the figure becomes protuberant in X-axis, the X value will need to be Increased like 0.002; while if now it become indentation, the X value will have to be reduced to as 0.0014.

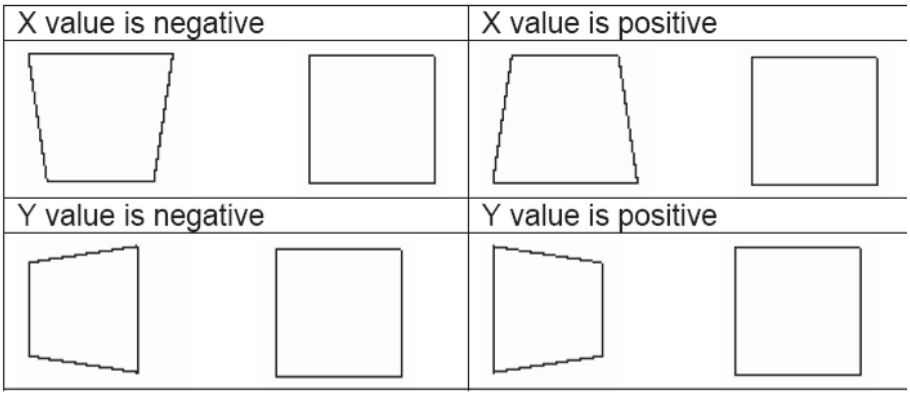
Keep adjusting the value until it is acceptable.



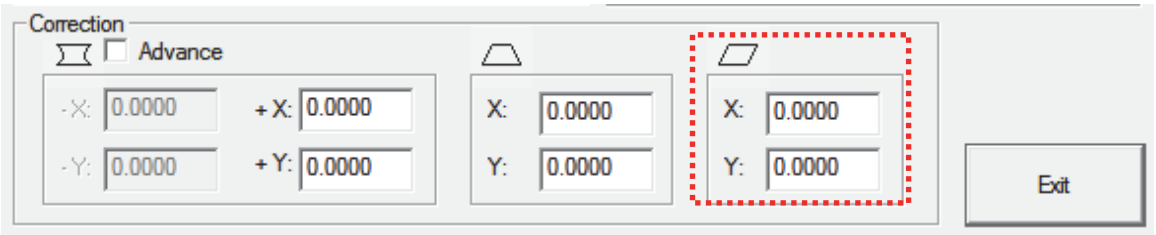
Step 6. If the square is trapezoid, go back to the “lens setup” to correct the irregular square.



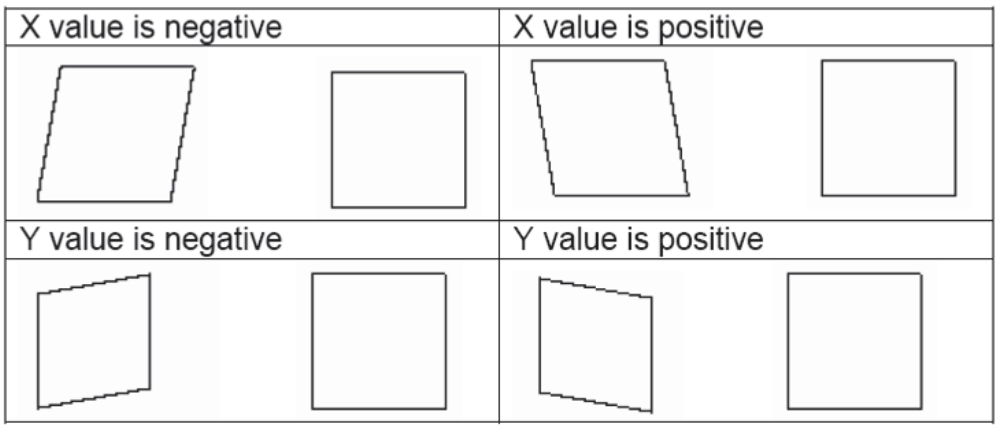
Step 7. If the number is adjusted from 0.0 to 0.1, the adjustment range is from 0mm up to 0.5mm. (For 140x140mm scan lens)
Keep adjusting the value until it is acceptable.



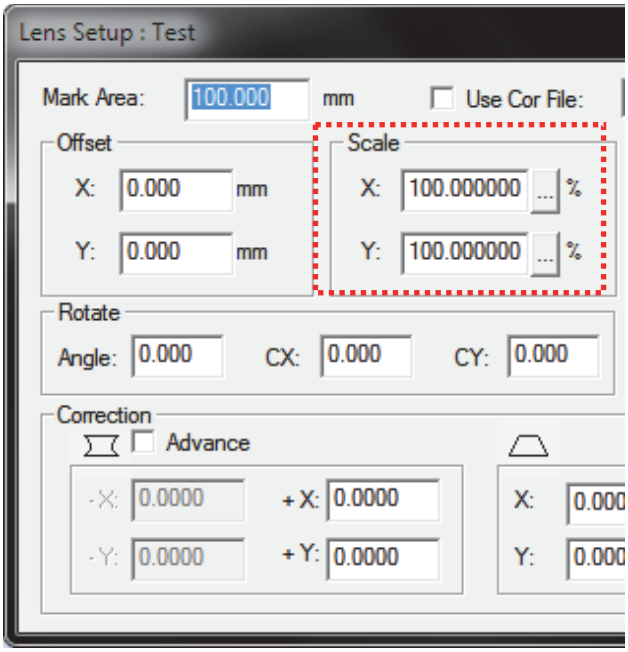
Step 8. If there is an irregular parallelogram, go to the “lens parameter” under the Configure to correct the irregular angle.



Step 9. Keep adjusting the value until it is acceptable.



Step 10. Measure the lengths of A, B, C, D and E of the square pattern. Make sure these lengths match to the expected length you set from the marking software.



Step 11. If not, correct scale proportionally.

Chapter 8

Basic Maintenance

Cleaning the Lenses

The majority of the StellarMark Marking Machine's components are properly shielded and cooled. No maintenance or regular service is needed to ensure the StellarMark stays in good working condition. The only regular maintenance that is required is the cleaning of the scan lenses.

8.1 Cleaning the Lenses

- Oil from hands and the residue that builds up on the scan lenses can distort the laser beam passing through, resulting in poor quality markings and may cause cracks by the uneven heat conduction.
- To clean the scan lens, simply remove the scan lens and inspect it for light and heavy residue marks.
- To clean light residue marks, apply some lens cleaner on each side of the lens. Use a new, lint free cloth to remove the lens cleaner. Make sure that the cloth only travels in one direction to prevent scratching the scan lens. Let the lens dry before reattaching it to the StellarMark. Be sure to clean one side at a time.
- To clean heavy residue mark, apply some lens cleaner on each side of the lens. Use a cotton swab to remove the caked on residue mark. Be careful not to scratch the lens. Use acetone if the lens cleaner will not remove the mark. After the mark is removed, follow the steps used to clean light residue marks in order to finish the cleaning.

NOTE

Acetone is an EXTREMELY FLAMMABLE LIQUID AND VAPOUR. The vapour is heavier than air and may spread long distances making distant ignition and flashback possible.

The only other regular maintenance duties besides lens cleaning needed to keep the StellarMark in good working order is regular spot checks. Before each use, inspect the machine, the power and connector cables, and the working environment. Look for frays in cables, proper connections, and any abnormalities that could have an effect on marking performance and/or user safety.

Be sure that the StellarMark is properly secured and mounted.

NOTE

Never touch the scan lens with your bare hand. The oils from your hand will distort the laser beam passing through the lens. Use finger cots or rubber gloves when cleaning. If a problem ever arises with the G-Mark Advance™ software or the StellarMark marking machine, be sure to notify your distributor as soon as possible.

Chapter 9

Appendix

StellarMark CIIA-LI Specification Sheet

StellarMark CIIA/CIIA-Li/CIIA-HS/C-100 Specifications

Model No.		C 12IIA Li	C 12IIA	C 12IIA HS	C 30IIA	C 100
Laser Source	Type	CO2, Sealed-off				
	Output Power	12 W			30 W	100 W
	Wavelength	10.6 m				
	Cooling	Air-cooled, no water chiller required				Water-cooled
Electrical Requirements	Power Supply	AC Auto Switching 115V / 230V, 50-60 Hz, / single phase				
	Power Consumption	740 W			1240 W	4600 W
Laser Marker Dimensions (L x W x H)		560 x 184 x 320 mm	620 x 200 x 150 mm	630.2 x 255 x 150 mm	620 x 200 x 150 mm	1410 x 260 x 210 mm
Control Unit Dimensions (L x W x H)		N/A	500 x 420 x 192.4 mm			485 x 650 x 180 mm
Laser Marker Weight		17.2 kg	15 kg		17 kg	42 kg
Control Unit Weight		N/A	17 kg		19 kg	22 kg
Max Linear Marking Speed		3,000 mm/s			3,000 mm/s	
Max Marking Speed		10,000 mm/s		4,000 mm/s	10,000 mm/s	
Operating System		Microsoft Windows 2000 / XP / Vista (32 Bit) / Win 7 (32 Bit) (Desktop or Laptop PC)				
Safety		Class 4 (Cass 3R available with safety door)				

All spec are subject to change without any prior notice.

** Material dependent.